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MOLLUSCA

COMPILED BY

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9. MOLLUSCA

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Greenland.—Tertiary fossils, East Greenland, **M. Y. Hassan**.

Alaska.—Sitka, Alaska—Pelecypoda, **E. B. Hunter**; Sitka Sound collecting area, **G. E. Lemke**.

Canada.—Quebec—Ordovician fossils from Waswanipi Lake, **T. H. Clark & D. A. W. Blake**; S.W. British Columbia, The Mollusca of the Pleistocene, **W. M. Dreycoot**; Alberta, a new Cambrian *Hyolithes*, **B. F. Howell** (2); *Congerina leucopheata* (Conrad) in the Hudson River, **M. K. Jacobson** (2); London, Ontario, a colony of *Cepaea nemoralis*, **W. W. Judd**; Lake Saint Jean, Champlain and Post-Pleistocene fauna, **Laverdière & Mailloux**; Amethyst Lake, Jasper, Alberta, its Limnology, **D. S. Rawson** (1); Great Slave Lake bottom fauna, **D. S. Rawson** (2); Mollusca from the Tertiary Kishenchu formation of S.E. British Columbia, **L. S. Russell** (1); Land shells of Cypress Hill, Saskatchewan, **L. S. Russell** (2); Fossils of the Middle Ordovician beds of Saguenay Valley, Quebec, **G. W. Sinclair**.

North Eastern United States.—Virginia, range and habitat of *Polymesoda caroliniana*, **Andrews & Cook**; Maryland Pleistocene fauna of Wailes Bluff and Langleys Bluff, **S. F. Blake**; Virginia, occurrence of *Mesodon andrewsae normalis* Pils., **P. R. Burch**; Hanover Co., Virginia, Mollusca (abstract note), **P. E. & J. B. Burch**; Michigan, U.S.A., Mollusca of Sodon Lake, Oakland County, occurrence of shells in the peat and marl sediments, **S. A. Cain & others**; Oldham Co., Kentucky, fossils of the Whitewater formation, **J. Conkin**; Mollusca of temporary pools and ponds of Illinois

and Ohio, **R. W. Dexter**; Douglas Lake, Michigan, interdepression benthic communities, **F. E. Eggleton**; New York, List of Lower Clinton fossils, **D. W. Fisher**; New York, a new Lower Devonian Cephalopod, **R. H. Flower** (2); New Jersey, occurrence of *Discus rotundatus*, **S. D. Freed**; York Co., Pennsylvania, revised list of Mollusca, **Heilman & MacMillan**; Virginia, new species of *Philomycus*, **L. Hubricht** (1); Zonitidae of Pittsylvania Co., Virginia, **L. Hubricht** (4); *Ventridens suppressus* (Say) in Staten Id., New York, **M. K. Jacobson** (1); Michigan—ecological notes on *Stenotrema hirsutum* (Say), **C. B. Lee** (1); Cleveland, Ohio, some faunules from the Wisconsinan Loess, **A. B. Leonard**; Trias life in the Connecticut Valley, **R. S. Lull**; Freshwater mussels used by Illinois Indians, **M. R. Matteson** (2); a new *Haplotrema* from Illinois, **G. R. Webb** (8).

South Eastern United States.—Land snails of the genus *Stenotrema* in Alabama, **A. F. Archer**; U.S.A. Ocala limestone bivalves, Eocene, **G. D. Harris**; Land snails of the southern Atlantic coastal plain, **L. Hubrecht** (2); Locality of *Mesodon andreusae normalis* (Pils.) locality Bent Creek, N.C., **L. Hubricht** (3); Texas Cretaceous Nautiloids figs., **B. Kummel** (1); Oklahoma land snails, a checklist, **L. Lutz**; A preliminary survey of land mollusca of Alachua Co., Florida, **E. H. Nickelson**; Florida currents and control of vertical distribution of zooplankton, **Moore, Owre, Jones & Dow**; On *Viviparus multilineatus* Say and its forms in the Florida region, **J. P. E. Morrison** (3); Alachuan County, Fla., Mollusca, description of vegetational communities and frequency of occurrence of species, **E. H. Nickelson**; Carolina and Florida, a new Tertiary Glycymerid, **D. Nicol** (4); Louisiana high temperature and low rainfall effect on oyster production, **H. M. Owen** (1); Land snails of the Duke Forest, N. Carolina, **A. S. Pearce** (1); Louisiana, Biological notes on *Fossaria parva* (Lea), **B. E. Prince**; Dallas County, Texas, Ecological notes on the Freshwater Mussels, **L. B. Read & R. H. Oliver**; Differences in bivalve fauna of Ocean Springs, Mississippi and Grand Isle, Louisiana, **S. W. Rosso**; Three new forms of *Liguus fasciatus* (Müll.),

A. de la Torre (1); Oklahoma, additional land snail records to check-lists, **I. E. Wallen**; new Succiniidae from Kansas and Oklahoma, **G. R. Webb** (6); Miami, Florida, and vanishing and extinct colonies of *Liguus fasciatus*, **F. R. Young**.

Western United States.—*Oreohelix*, San Diego Co., California, **J. L. Baily, jr.**; Puerto Penasco, Sonora, molluscan notes, **S. S. Berry** (1); San Diego Co., California, a new *Helminthoglypta*, **S. S. Berry** (2); Arizona, Permian fossils, **H. Chronic**; Washington, D.C., occurrence of *Pomatiopsis lapidaria*, **W. B. DeWitt**; California, a Pleistocene fauna from San Diego Co., **Emerson & Addicott**; Arizona, a new *Sonorella*, **W. O. Gregg** (1); Arizona, two new snails *Oreohelix* and *Ashmunella*, **W. O. Gregg** (2); Utah, some Sphaeriidae, **Harrington & Roscoe**; California, a new Pleistocene *Diodora*, **G. P. Kanakoff**; Kansas, a new *Succinea*, **C. B. Lea** (2); Idaho, *Magnipelta* a new genus of Arionidae, figs., **H. A. Pilsbry** (2); Meade Co., Kansas, shells from an interglacial deposit, **H. v. d. Schalie** (2); Arizona, shells from the Montezuma Castle National monument, Yanapai Co., **A. G. Smith**; California Pliocene and Pleistocene extinct and locally extinct genera, **W. P. Woodring**; Cretaceous, species of *Pyrgulifera* from the Bear River formation, **T.-C. Yen** (2); Shaw Point, Oneida Lake, N.Y.; S.E. end of Bear Lake, Utah; Great Falls on the Potomac River, Maryland; Forest Stream, Denmark; Trusker formation, Nevada; Tulare formation, California; Kootenai formation, Montana; Fort Union formation, S. Montana; Freshwater molluscan assemblages and their ecological interpretations, **T. C. Yen** (3).

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Distribution *Polymesoda caroliniana* (Bosc) from Vera Cruz, Mexico to Warwick River, N.C., **J. D. Andrews** (2).

Mexico.—Permian fossils, **Cooper & others**; N.W. Chihuahua, a new species of *Amnicola* figs., **R. J. Drake**; Mexico Cambrian, a probably new *Helcionella*, **C. Lochman**; a new *Strobilops* from Sinaloa, **J. P. E. Morrison** (2); Land Mollusca from Nuevo Leon, Mexico,

H. A. Pilsbry (4); Northern Mexico Mollusca, **H. A. Pilsbry** (5).

Panama.—A new *Promenetus*, **D. W. Taylor**.

Cuba.—Some new species and subspecies from East Cuba, **C. G. Aguayo**; Baracoa, Land Mollusca, **Aguayo & Jaume** (1); New land Mollusca from Cuba, **Aguayo & Jaume** (2); Eastern Cuba, a new *Chondropoma* and *Cepolis*, **Aguayo & Quiñones**; Cuban Cerionidae, **Aguayo & Roig**; Cuba, a new *Helicina*, **Aguayo & de la Torre**; Eastern Cuba, some new species of *Cerion*, **Clench & Aguayo** (1); New Cuban *Cerion*, **Clench & Aguayo**; Cuban tree snails, **J. W. Lippincott**; Cuba, new *Cerion* and *Chondropoma*, **A. de la Torre** (2).

Tobago.—Two new subspecies of *Voluta musica*, **A. H. Verrill** (2).

Puerto Rico.—*Schistosoma* infection of *Tropicorbis*, **R. M. McQuay, jr.**; Puerto Rico, Land and Fresh-water Mollusca, **H. v. d. Schalie** (1); Puerto Rico—occurrence of *Yoldia* (*Adrana*) *perprotracta* Dell, living, figs., **Warmke & Abbott**.

Bermuda.—A new *Strobilops*, **J. P. E. Morrison**.

Yucatan.—On non-marine Mollusca of Yucatan, text-figs., **H. W. Harry**.

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Colombia.—Road from Cartagena to Barranquilla, lake Cienaga de Lurnaco, a new *Pomacea*, **Pilsbry & Olsson** (1).

Venezuela.—New species of *Nenia* from Perija region, **C. S. Arias**.

Ecuador.—Subfossil Mollusca of Peu de Santa Elena, Ecuador, **R. Hoffstetter**; S.W. Ecuador, Miocene, **J. G. Marks**; Pleistocene Mollusca, **R. Rivera**.

Brazil.—Paraná, List of Mollusca, **J. J. Bigarella**; Mollusca from Ilha Grande, Rio de Janeiro, Brazil, **F. Haas** (1); Paraná, some Devonian fossils, **R. Maack**; Three new Opisthobranchia, **E. Marcus** (2).

Chile.—New Planorbidae, **W. A. Biese**.

Peru.—Late Triassic gastropods from Central Peru, **O. Haas** (2); Vaginulidae, **O. Kraus** (1) A new genus and species from the Trias, **Nicol & Allen**; *Vertigo ventri-*

cosa as intermediate host of *Hasstilesia*, **W. B. Rowan**; New species of Land-snails, **A. Zilch** (2).

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Alexander I. Land, Lower Cretaceous, **L. R. Cox**.

Graham Land.—Upper Cretaceous cephalopods, **L. F. Spath**.

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Baltic.—Differences in physiological features of mussels from the Baltic and Barents Sea, **Belyaev & Tchugunova**.

Eastern North Atlantic.—Clyde Sea Area and epifauna of deep-water muds, **J. A. Allen** (1); Dogger Bank change in composition of bottom fauna, **L. Birkett**; North Sea, notes on *Dentalium vulgare* and *D. entalis* on the Dutch coast, **A. Bloklander**; Milford Haven and *Crepidula fornicata*, **Cole and Baird**; *Ommastrephes sagittatus* on the East Coast of Scotland, **A. S. Gillespie**; Dutch Waddenzee, occurrence of *Alderia modesta* (Løvén) and *Limapontia depressa* Ald. & Hand., **G. D. Hartog & C. Swennen**; Dutch Waddenzee and occurrence of *Alderia modesta* and *Limapontia depressa*, **Hartog & Swennen**; Plymouth, the biomass of the bottom fauna in the English Channel, **N. A. Holme**; North Sea Prosobranchs, **S. Jaeckel** (7); North Sea Lamellibranch, **S. Jaeckel** (8); Dutch coastal records, **J. A. W. Lucas**; Scottish seas, some rare Mollusca recently found, **A. C. Stephen**; On Plankton from the Bay of Banyuls, France, **T. Thomopoulos**; Dutch Waddenzee and ecology of distribution of *Cardium* and *Mytilus* and source of their food supply, **J. Verwey** (1); Rivers Roach and Crouch, production and setting of oyster larvae, **G. D. Waugh**.

Western North Atlantic.—A new Rissoid from Maryland, fig., **P. Bartsch** (2); Mississippi Sound and 'Louisiana Marsh' Oyster bed and the effect on them by the Bonnet Carré Spillway, **G. Gunter** (2); Bahamas, another specimen of *Fastigiella carinata* Rve., **G. F. Kline**; Biscayne Bay, Florida, notes on

Littorina angulifera rates of growth, **R. E. Lenderking**; Western Atlantic, a new Glycymerid, **D. Nicol** (3); Eleuthera, Bahamas and *Fastigiella carinata* Rve., **H. A. Pilsbry** (1); Floridan Volutidae materials for a revision, **Pilsbry & Olsson** (2); Narragansett Bay, growth and abundance of *Venus mercenaria* and *Callocardia morrhuana*, table, **D. M. Pratt**; Western Atlantic and *Scaevargus unicolorrhus*, **G. L. Voss** (1).

Gulf of Mexico.—A new *Niso* from between Mississippi delta and Cedar Keys in 111 fms. on mud bottom, **P. Barisch** (1); Notes on some marine shells and description of a new *Conus*, **Clench & Pulley**; Oysters of the Gulf of Mexico and neighbouring seas, **G. Gunter** (1); N.W. portion of the Gulf of Mexico with reference to the invertebrate fauna, **J. W. Hedgpeth**; Gulf of Mexico, *Conus rainesae* sp. nov., **T. L. McGinty**; São Sebastião a new *Pseudovermis*, **E. de B.-R. Marcus** (1); Texas, a new *Chione*, **T. E. Pulley** (2); Cayman Islands, Oxford University Expedition, **A. E. Salisbury** (3); *Murex bicolor* in Floridan waters, **M. M. Teare** (2); Florida Keys, a new Myopsid Squid figs., **G. L. Voss** (2).

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Western Pacific.—Japan Sea, a new species of *Miamira*, **K. Baba**; Sea of Japan, vertical distribution of animal plankton, **K. Furuhashi**; Spatial distribution of *Meretrix lusoria* and *Macra veneriformis* in a natural 'seed bed' in Buzen Sea, Japan, **Furukawa & Suzuki**; Japanese Fissurellidae, **T. Habe** (2); New Japanese marine shells, figs., **T. Habe** (3); Twelve new species of Japanese shells, **T. Habe** (3); Japanese species of Lacunidae, **T. Habe** (5); Occurrence of *Recluzia montrouzieri* Brazier near Seto, Japan, **Habe & Fokioka**; Hachijo Island insular shelf and neighbouring banks and their bottom characters, **Hatai, K., Niino, H.**

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Red Sea.—*Murex*, **M. Taylor**.

Indian Ocean.—Marine plankton of coastal waters of Calicut, **P. C. George**; Mauritius, a new *Montacuta* figs., **H. C. Ray** (1); Indian Ocean, some new deep-sea molluscs, **H. C. Ray** (2); Malabar coast occurrences on inshore sea bottom, **E. Seshappa**.

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Pleistocene.—Pleistocene fauna of Wailes Bluff and Langleys Bluff, Maryland, **S. F. Blake**; Mollusca of the Pleistocene or Ice Age of south-west British Columbia, **W. M. Draycott**; Pleistocene S.W. San Diego Co., California, **Emerson & Addicott**; A new Pleistocene *Kellyella* from Moeshima, Japan, **T. Habe** (3); Upper Pleistocene, a new *Diodora* of California, **G. P. Kanakoff**; Pleistocene fossils in Cleveland, Ohio, **A. B. Leonard**; Faunule substage of Wisconsinan age Tazewellian substage, **Leonard**; Tokyo Pleistocene *Margaritifera margaritifera*, **H. Ozaki**; Pleistocene Mollusca of Ecuador, **R. Rivera**; Pleistocene shells from an interglacial deposit, Meade Co., Kansas, **H. v. d. Schalie** (2); Mid-European, **U. Steusloff** (1); Pleistocene fossils from Tokyo, **H. Ujiie**; Pliocene and Pleistocene extinct and locally extinct genera of California, **W. P. Woodring**.

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D. Nicol (4); Tertiary Mollusca from the Kishenchu formation, S.E. British Columbia, **L. S. Russell** (1); New Zealand species of *Pellicaria* from the Tertiary of East Wairarapa, **P. Vella**.

Pliocene.—Derived marine Pliocene fossils **Blanc & Segre**; Certain Pliocene to Quaternary assemblages and their ecological interpretations, **T.-C. Yen** (3).

Miocene.—Middle Miocene Turridae of Hungary, **M. Csepregyhyné** (1); Middle Miocene fossil of Salgótarján, **M. I. Csepregyhyné** (2); A new Upper Miocene *Siphonalia* from Kyushu, Japan, **J. Itoigawa**; Miocene Ecuador, **J. G. Marks**; Miocene *Hydrobia* in sediments of R. Oslava, **M. Pokorný**.

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Eocene.—An Eocene Lamellibranch, **F. E. Eames**; Eocene bivalves from the Ocala Limestone, U.S.A., **G. D. Harris**; Middle Eocene, Esztergen, **E. Szöts**; English Eocene Veneridae, **W. E. Tremlett** (1) & (2); English Eocene *Siphonalia* and *Pseudoneptunea*, **A. Wrigley**.

Paleocene.—Mollusca of the Flagstaff Formation, Central Utah, **A. La Rocque**; Molluscan Paleocene of Western Siberia, **Lipman**.

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Belemnites, **T. Hanai** (4); Lower Cretaceous Nautiloids from Texas, figs., **B. Kummel** (1); Japanese Desmoceratinae from the Cretaceous figs., **T. Matumoto** (2); Some Cretaceous Gaudryceratidae of Japan, **T. Matumoto** (3); Japan a note on the Cretaceous Phylloceratidae, **T. Matumoto** (4); A new form of Cretaceous Ammonoid from Japan, **T. Matumoto** (5); Bugey, (Ain) Sequanian ammonite proving the age of coralline formations, **M. Pelletier**; Upper Cretaceous Angola, **J. V. L. Rennie**; Upper Cretaceous Cephalopods from Graham Land, **L. F. Späth**; Campanian fossils from Bélesta (Ariège), **J. Villatte**; Mollusca in lower Cretaceous of Leue depression, Russia, **Voronetz**; Upper Cretaceous fossils from near Sage Junction, Wyoming, **T.-C. Yen** (1).

Jurassic.—Jurassic Ammonites from Jebel Tuwaig, Arabia, **W. J. Arkell**; Oxfordian, Argovian and Glyptician fossils in Jura Salinois, **A. Caire**; On some Jurassic fossils of Madagascar, **M. Collignon**; Jurassic, E. Greenland, **D. T. Donovan**; Fossils from the Bathonian of the Ardennes figs., **J. C. Fischer**; Jurassic *Pseudanucella* from the Bay of Plenty, N.Z., **C. R. Fleming** (2); Jurassic, correlation of North American formations except Canada, Indicator species in text, **R. W. Imlay**; Jurassic migrations in New Zealand, **J. Marwick** (1); Jurassic of Northern Alsace, **P. L. Mauberge** (1); Jurassic Mollusca in Donbas, Russia, **Strelin** (2).

Lias.—Upper Lias fossils from Huntingdonshire, **J. L. Gilbert**; **R. Monterde**.

Trias.—Upper Trias, Algeria, **S. Defretin & others**; Triassic Mollusca from Central Peru, **O. Haas** (2); Trias, *Ceratites nodosus* Schloth fig., **E. Kuhn-Schnyder**; Lower Trias Salt Range Nautiloids, **B. Kummel** (2); Trias N.Z., a new Nautiloid, **B. Kummel** (3); Connecticut Valley Trias life, **R. S. Lull**; Triassic migrations in New Zealand, **J. Marwick** (1); Upper Trias *Isopristes* gen. nov. from Peru, **Nicol & Allen**; Poland, **E. Passendorfer** (2).

Permian.—Fossils from the Kaibab formation of Walnut Canyon, Arizona, **H. Chronic**.

Carboniferous.—Upper Carboniferous relative growth of Anthracosiidæ,

R. M. C. Eagar (1); Upper Carboniferous, **R. M. C. Eagar** (2); Some Carboniferous fossils in Co. Dublin and Meath, **J. E. Scanlon**; Carboniferous Nautiloids of Great Britain (*Orthoceras gigantea* and allied forms), **T. S. Turner** (2).

Devonian.—A Lower Devonian (Helderbergian) Cyrtoconic Cephalopod, **R. H. Flower** (2); Devonian Mollusca of Prebaltic, **Liepinsh**; Devonian fossils from Paraná, **R. Maack**; Devonian of the Spanish Sahara, **T. R. Mellado**.

Silurian.—Lower Clinton fossils from western New York, **D. W. Fisher**; New York, a new Conularid, **B. F. Howell**.

Ordovician.—Fossils from Waswanipi Lake, Quebec, **T. H. Clark & D. A. W. Blake**; Ordovician Nautiloids from New South Wales, **B. F. Glenister**; Quebec Middle Ordovician fossils, **G. W. Sinclair**.

Cambrian.—Lower Cambrian Hyolithes from Alberta, **B. F. Howell** (2); A Cambrian *Helcionella* sp.? Mexico, **C. Lochman**.

III.—SYSTEMATIC INDEX

N.B.—FULL REFERENCES ARE GIVEN ONLY IN THE CASE OF A NEW GENUS, SPECIES OR VARIETY. IN OTHER CASES REFERENCE SHOULD BE MADE TO THE LIST OF TITLES TO THE PAPER BY THE AUTHOR WHOSE NAME IS GIVEN IN THE SHORT REFERENCE IN THE SYSTEMATIC LIST, AND UNDER WHICH, IN THE LIST OF TITLES THE FULL REFERENCE WILL BE FOUND. WHERE FULL REFERENCE IS GIVEN IN THE SYSTEMATIC PART THE VOLUME NUMBER IS GIVEN IN small clarendon.

Note.—The arrangement here used follows in general that of Thiele's Handbuch. The most important differences are that Epitonacea and Pyramidellacea are placed immediately preceding Muricacea in order of grouping and the families Triviidae and Eratoidae are placed in Lamellariacea.

Where more than one page is given in a reference, the one in roman type

is where the new name is first mentioned and the one in *italic* is where the gen. sp. or var. is actually described.

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Chitons—a key to the common species of New Zealand, **R. K. Dell** (5); Loricata of the U.S.S.R., **A. M. Yakovleva** (1); Polyplacophora bioluminescence, chapter viii, **E. N. Harvey**.

CHITONACEA

Amicula gurbanovae p. 85 N. Pacific, S. Japan and Okhotsk seas.—*A. rosea* p. 86 Okhotsk sea, Sakhalin: **spp. nov.**, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952 p. 86.

†*Archinacellidae* **fam. nov.** for *Archinacella* Ulrich & Scofield 1897 and ? *Ptychopeltis* Perner 1903, **J. B. Knight** Smithsonian misc. Coll. 117 13 1952 p. 47.

Callistochiton incurvatus near Pernambuco type in Brit. Mus. p. 9 f. 6, 7; *C. indicus* Peros Banhos Archipelago p. 13 f. 9, 10 type in Brit. Mus. **spp. nov.**, **E. Leloup** Bull. Mus. Hist. nat. Belg. 29 30 1953.—*C. adenensis* Sm., *C. antiquus* Rve., var. *meridionalis* Ashby; *C. crassicostatus* Pils.; *C. decoratus* Pils.; *C. granifer* Hull; *C. incurvatus* Leloup; *C. indicus* Leloup; *C. palmulatus* Pils.; *C. pulchellus* (Gray) anatomic characteristics, figs., **E. Leloup** (1).

Chiton chemical contents of certain species, **Gabe & Prenant** (4).

Chactopleura reesi **sp. nov.** Jacksons Point, Grand Cayman, **A. E. Salisbury** Proc. Malac. Soc. London 30 1/3 1953 p. 41 pl. 7.

Gurjanovillia derjugini p. 98; Okhotsk sea.—*G. andrijaschevi* N. Japan sea p. 99.—*G. kobjakovae* N. Okhotsk sea p. 100.—*G. lindbergi* S. Okhotsk sea: **spp. nov.** p. 101, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952.

Ischnochiton (*Lepidozona*) *berryanus* Leloup 1941, a synonym of *I. (L.) nipponicus* Berry, 1918, **P. Kaas** Basteria 17 4 1953 p. 55.

Lophyrochiton **gen. nov.**, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952 p. 102.

Mopalia seta **spec. nov.** Japan sea, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952 p. 77.

Placiphorella uschakovi **sp. nov.** Okhotsk sea, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952 p. 81.

Tonicella zotini **spec. nov.** N. Pacific, Japan & Okhotsk seas p. 70.—*T. granulata* **spec. nov.** Northern Pacific, Japan and Okhotsk seas, p. 69, **A. M. Yakovleva** Tabl. anal. Faune U.R.S.S. 45 1952.

Gastropoda

Gastropoda. Gastropods—a key to some families of African fauna, **Alves & Clarke**; Gastropoda relation between pre- and post-anaerobic oxygen consumption and oxygen tension in some freshwater species, **Von Brand & Mehlman**; Gastropoda bioluminescence, chapter viii, **E. N. Harvey**; Gastropod genera of west North America an illustrated key, **A. M. Keen & J. C. Pearson**; Gastropoda and the bearing of primitive fossils on Classification, **J. B. Knight**; Gastropoda fossils, replacement by Cassiterite at Emma-ville, N.S.W., **L. J. Lawrence**; Gastropoda of Sitka, Alaska, **G. E. Lemke**; Gastropoda of fresh water, **H. Mellanby**; Gastropoda of the freshwater in the United States, **R. W. Pennak**; Gastropoda of the Great Slave Lake bottom fauna, **D. S. Rawson** (2); Gastropoda examination of shell structure by X-rays, **G. Sabatier**; Land Gastropoda of the Italian littoral, **C. F. Sacchi** (2); Gastropoda of Ruderalstellen, **W. Tischler**.

STREPTONEURA

Aspidobranchiata

Rhipidoglossa

BELLEROPHONTACEA

†*Bellerophon deflectus* **sp. nov.** Permian Arizona, **H. Chronic** Bull. geol. Soc. Amer. 63 2 1951 p. 111 pl. 1 f. 2a-3b.

†*Bellerophon mohri* a diagnostic species of the Whitewater formation of S. Ohio, **J. Conkin**.

†*Euphemites aquisulcatus* **sp. nov.** Permian Arizona, **H. Chronic** Bull. soc. Geol. Amer. 63 2 1951 p. 113 pl. 1 f. 1 a-c.

HALIOTIDACEA

†*Ananias franciscanus* p. 114 pl. 2 f. 5a-b; *A. gibber* p. 115 pl. 2 f. 10; spp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951.

†*Brochidium vareasense* sp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. 101 1953 p. 33 pl. 2 f. 14, 15, 19-21.

Diodora semilunata sp. nov. Okinawa, Ryukyus Japan, **T. Kuroda** Ill. Catal. Jap. Shells No. 23 Ap. 1953 p. 184.—†*D. constantiae* sp. nov. Palos Verdes sand Upper Pleistocene California, **G. P. Kanakoff** Bull. S. Calif. Acad. Sci. 52 2 1953 p. 67 pl. 12 f. A-C.

Emarginula fujitai p. 33 pl. ii f. 32, 33 = *E. foveolata* Fujita non Schepman; *E. hatai* p. 34 pl. ii f. 13, 20 = *E. foveolata* Nomura & Hatai non Schepman, nomen. nov.; *E. regia* p. 36 pl. ii f. 30, 31; *E. hosoyai* p. 37; *E. teramachii* p. 38 pl. ii f. 14, 23; *E. tosaensis* p. 39; *E. compta* p. 41 pl. ii f. 11, 12, *E. okinawaensis* p. 44 pl. ii f. 5, 6; spp. nov. Japan, **T. Habe** Publ. Seto mar. biol. Lab. 3 1 1953.

†*Euconospira* ? *cryptolirata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 116 pl. 2 f. 11, 12.

†*Euomphalus kaibabensis* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 126 pl. 4 f. 15-16c.

†*Glabrocingulum laeviliratum* p. 117 pl. 2 f. 7-9b; *G. ? coronatum* p. 118 pl. 3 f. 1a-3 spp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951.

Haliotis tuberculata L. citric acid content, **P. V. Creac'h** (1, 2).—*H. kamtschatkana* investigation off Prince of Wales Island, **R. Livingstone**; *H. sanguinea* Hanley occurrence at Cowaramup Bay, South of Yallingup, Western Australia, **J. H. Macpherson** (1).—*H. iris* the "pawa" from Stewart Island N.Z., **G. A. Usher**.

†*Kittlidiscus* nom. nov. for *Schizodiscus* Kittl 1891 (non Clarke 1888)—type *Pleurotomaria plana* Klipstein 1943, **O. Haas** Bull. Amer. Mus. nat. Hist. 101 1953 p. 59 footnote.

Laeviemarginula membranacea gen. et sp. nov. Okinawa Ryukyus Japan, **T. Kuroda** Ill. Catal. Jap. Shells No. 23 Ap. 1953 p. 183.

Monodilepas monilifera cookiana subsp. nov. 40° 52' S 174° 46' E 62 fms., **R. K. Dell** Trans. roy. Soc. N.Z. 81 1 1953 p. 149 text-fig. B f. 13-15, pl. 16 f. 3.—*Monodilepas* in New Zealand, *M. monilifera skinneri* Finlay; *M. otagoensis* Finlay; *M. diemenensis* Finlay; *M. monilifera monilifera* (Hutton) figs., **R. K. Dell** (2).

†*Mourlonia* ? *cancellata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 119 pl. 3 f. 4a-c.

†*Murchisonia geminocarinata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 123 pl. 4 f. 12-14.

†*Pareuryalox* gen. nov. Pleurotomariidae genotype *P. perornata* sp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. 101 1953 pp. ix, 24 pl. 1, f. 30, 31, 42, 43.

†*Pernotrochus* gen. nov. Pleurotomariidae genotype *Pernotrochus arizonensis* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 120 pl. 3 f. 5a-7.

†*Phymatifer peruvianus* sp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. 101 1953 p. 32 pl. 2 f. 5, 6, 12, 13.

†*Platyworthenia* gen. nov. Pleurotomariidae genotype *Platyworthenia delicata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 121 pl. 3 f. 8a-9.

†? *Ptychomphalina discoidea* sp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. 101 1953 p. 27 pl. 1 f. 46, 47, 54-58.

†*Retispira undulata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 113 pl. 2 f. 1a, b.

†*Stegocoelia quadricostata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 126 pl. 4 f. 10.

Tugalina radiata gen. et sp. nov. Okinawa, Ryukyus Japan, **T. Kuroda** Ill. Catal. Jap. Shells No. 23 Ap. 1953 p. 183.

†*Worthenia corrugata* sp. nov. Permian, Arizona, H. Chronic Bull. Soc. geol. Amer. 63 2 1951 p. 122 pl. 4 f. 1a-c.

Prosobranchiata

Prosobranchiata—transference of sperm from male to female, figs., V. Fretter (2); Prosobranch Gastropoda on the radulae, Gabe & Prenant (3); Prosobranchiata North Sea, S. Jaekel (7); Prosobranchiata—studies on freshwater species, H. Schäfer (2); Prosobranchiata—filter mechanism and filtration, figs., B. Werner (2).

Docoglossa

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Acmaea the vertical zonation, J. A. Shotwell.

Acmaea turveri sp. nov. Punta Colorado near Guaymas Mexico, Hertlein & Strong Bull. S. Calif. Acad. Sci. 50 3 1951 p. 152 pl. 51 f. 1-3.

†*Acmaea actina elevata* var. nov. Tertiary East Greenland, M. Y. Hassan Medd. Grønland 111 5 1953 p. 31 pl. C f. 7, 8.

†*Helcionella* sp. indet. Cambrian Mexico, C. Lochman Smithson misc. Coll. 119 1 1952 p. 114 pl. 28 f. 23-25.

†*Hypseloconidae* fam. nov. for *Hypseloconus* Berkey 1898 and *Pollicina* Holzapfel 1895, J. B. Knight Smithson. misc. Coll. 117 13 1952 p. 47.

Patella vulgata L. citric acid content, P. V. Creac'h (1, 2).—*P. vulgata* purification of arizsulphatase, Dodgson & Spencer.—*P. vulgata* chemical contents, J. Etienne-Petitfils.—*P. vulgata, depressa, athletica* = *aspera*, biological notes from the south coast of England, R. G. Evans.—*P. caerulea* growth and yolk formation, F. Ranzoli (2).—*Patella* oogenesis, F. Ranzoli (1).—*Patella*, lack of common open rock limpets noted in parts of coast of N. Florida and the Carolinas, T. A. & A. Stephenson.

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belong to the genus *Adamsenida* . . . allied to *Solariellopsis pulchra* Schapman," T. Habe Venus 17 3 1953 pp. 133 & 142 text-figs. 3, 4.

†*Amberleya monilis* sp. nov. Sequanian Roi-Chat., Houdard & Delphey Bull. Soc. Hist. nat. Yonne 94 1948 p. 33 text-fig. 9 pl. 1 f. 15.

†*Anomphalus biconcavus* p. 78, pl. 5 f. 11, 12, 18-20; ? *A. amorphus* p. 79 pl. 5 f. 23-30 spp. nov. Mesozoic late Trias, Peru, O. Haas Bull. Amer. Mus. nat. Hist. 101 1953.

†*Calliostoma (Eocalliostoma) concavum* sp. nov. Mesozoic, late Trias, Peru, O. Haas Bull. Amer. Mus. nat. Hist. 101 1953 p. 99, pl. 6, f. 60, 62-66.

†*Chartroniella callistomoides* p. 24 pl. 1 f. 20; *C. (Rothpletzella) bicarinata* p. 24 text-fig. 11 pl. 1 f. 21 spp. nov. Roi-Chat, Houdard & Delphey Bull. Soc. Sci. Hist. nat. Yonne 94 1948.

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†*Eocalliostoma* subgen. nov. of *Calliostoma* Swainson subgenotype *Calliostoma interruptum* Cox 1949, O. Haas Bull. Amer. Mus. nat. Hist. 101 1953 pp. x, 99.

†*Eosolariella* subgen. nov. of *Solariella* Wood pp. x, 87 sub-genotype *Margarita turbinea* von Ammon 1893, O. Haas Bull. Amer. Mus. nat. Hist. 101 1953.

†*Eotrochus* ? *viratus* sp. nov. Permian Arizona, H. Chronic Bull. Soc. Geol. Amer. 63 2 1951 p. 129 pl. 4 f. 7a-8.

†*Eucycloscala pascuensis* p. 102 pl. 6 f. 61-69, 72-76 sp. nov.; *E. körneri* p. 103 new name [sp. nov.] = Körner's sp. *E. cf. elegans* from the Trias Peru, O. Haas, Bull. Amer. Mus. Nat. Hist. 101 1953.

†*Eucyclus denticulatus* sp. nov. Mesozoic, late Trias Peru, O. Haas Bull. Amer. Mus. nat. Hist. 101 1953 p. 84 pl. 5 f. 49-53, 56-61.

†*Glyptospira* gen. nov. p. 127 Trochomatidae genotype *Glyptospira cristulata* pp. 127, 128 sp. nov. Permian

Arizona, **H. Chronic** Bull. Soc. Geol. Amer. **63** 2 1951 pl. 4 f. 4a-6b.

†*Guidonia* De Stefani emend. pp. ix, 56; *G. peruviana* p. 65, pl. 4 f. 1-3, 5-9, 11-18, 20, 32, 42; *G. planetecta* p. 67, pl. 4 f. 19, 21-31, 33-35, 37, 38, 44, 45; *G. intermedia* p. 69, pl. 4 f. 36, 39-41, 43, 46-48, 50, 52, 53, 58-60; *G. parvula* p. 71 pl. 4, f. 49, 51, 54-57, 61-75, 79, 80; *G. bifasciata* p. 74 pl. 4 f. 76-78, 81-85; pl. 5 f. 1-3, 7, 8, 14, 15, 21, 22 spp. nov. Mesozoic late Trias Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953.

†*Hesperocirrinae* subfam. nov. of Cirridae for *Hesperocirrus* and *Sororcula* gen. nov. [q.v.], **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953 pp. ix, 39.

†*Hesperocirrus* gen. nov. pp. ix, 41 of Cirridae genotype *H. robusteornatus* sp. nov. p. 42 pl. 2 f. 35-37, 41, 43, 44, 47-49, 51-53; gen. includes *Hamusina triasica* Cox; *H. striatus* p. 48 pl. 2 f. 42, 46, 54, 56, 57-60.—*H. modestus* p. 49, pl. 3, f. 16-18, 23, 24, 29, 37-39; spp. nov. Mesozoic late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953.

†*Homalopoma* (*Boutillieria*) new species, **O. Haas** Bull. Amer. Mus. Nat. Hist. **101** 1953 p. 107.

†*Leptothyra* ? *campaniense* sp. nov. Campanian France, **J. Villatte** Bull. Soc. Hist. nat. Toulouse **87** 3-4 1952 pp. 317, 321 pl. ii f. 8-9.

†*Proconulus discinctus* sp. nov. Bathonian, Ardennes, **J. C. Fischer** J. Conchyliol. Paris **93** 1 1953 p. 10 pl. 1 f. 7, 8.

†*Rothpletzella*, **Houdard & Delpy**.

Sequenzia hosyu sp. nov. (ex Kuroda MS.) Trochidae Tosa Bay, Shikoku, Japan, **T. Habe** Venus **17** 3 1953 pp. 134 & 142 text-fig. 5.

†*Solariella* (*Eosolariella*) *pusilla* p. 89 pl. 6 f. 1-10, 14-16; *S. (E.) brevispira* p. 90, pl. 6, f. 11-13, 17-19, 24-26; *S. (E.) distincta* p. 92 pl. 6, f. 23, 27-32 spp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953.

†*Solariconulus elegans* p. 95 pl. 6 f. 36-39, 41, 42; *S. ninacacanus* p. 95, pl. 6, f. 40, 43-50, 54, 55; *S. infrequens* p. 97, pl. 6, f. 51-53, 56, 57; spp. nov. Mesozoic, late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953.

†*Sororcula* gen. nov. pp. ix, 51, Cirridae genotype *S. gracilis* sp. nov. p. 52 pl. 3 f. 28, 30, 31, 35, 36, 42-46; *S. costata* sp. nov. p. 54 pl. 3 f. 32-34, 40, 41, Mesozoic late Trias, Peru, **O. Haas** Bull. Amer. Mus. nat. Hist. **101** 1953.

†*Strianematina* gen. nov. Trochoturbinidae genotype *S. pulchralirata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. geol. Amer. **63** 2 1951 p. 130 pl. 5 f. 3.

†*Toxoconcha gracilis* sp. nov. Mesozoic late Trias Peru, **O. Haas** Bull. Amer. Mus. Nat. Hist. **101** 1953 p. 150 pl. 9 f. 6-9.

Turbo marmorata shell composition, **Roche, Ranson & Eysseric-Lafon**.—*T. coronatus* Solander effect of food on growth and coloration, **I. Takashi**.

†*Turricula sakhalinensis* sp. nov. Oligocene, Japan, **H. Takeda** Coal Mining Technology No. 3 Geol. Sec. Hokkaido Assoc. 1953 p. 49 pl. ii f. 2, 4, 5, 8, 9.

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Emoda blanesi sp. nov. "Clench & Aguayo" Cuba, **C. G. Aguayo** Mem. Soc. cubana Hist. nat. **21** 3 1953 p. 301 pl. 35 f. 1, 2.

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†*Neritaria obliqua* p. 161 pl. 9 f. 27, 36-38, 40-42, 45, 46, 49-52; *N. discosmoides* p. 163 pl. 9 f. 33, 39, 43, 44, 47, 48, 54, 54 pl. 10 f. 1-7, 9, 29, 32;

N. hologoroides p. 166 pl. 10 f. 8, 10-28, 30, 33, 35.—*N. ninacacana* p. 169, pl. 10 f. 31, 34, 38-42, 44-47, 49-55, 57; *N. distincta* p. 172 pl. 10 f. 43, 48, 56, 58-67 pl. 11, f. 1-6, 9; *spp. nov.* Mesozoic late Trias, Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953.

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†*Neritodomus lorioli* *sp. nov.* Sequanian Roi-Chat, Houdard & Delpy Bull. Soc. sci. Hist. nat. Yonne 94 1948 p. 18 text-figs. 2, 3 pl. 1 f. 4.

†*Neritoma (Neridomus) louisiae* *sp. nov.* Bathonian, Ardennes, J. C. Fischer J. Conchyliol. Paris 93 1 1953 p. 15 pl. i f. 19-25.

†*Oncochilus peruvianus* *sp. nov.* Mesozoic late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953 p. 179 pl. 11 f. 7, 8, 11.

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†*Trachynerita tambosolensis* p. 175 pl. 11 f. 18, 19, 24; *T. porrecta* p. 176 pl. 11 f. 27, 28, 31; *spp. nov.* Mesozoic Late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953.

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Arimia minor elongata *var. nov.* Is. Negros p. 5, pl. 2, f. 12 (Mlddf. nom. nud.); *A. (Leucarinia) costata moellendorffi* Is. Negros *subsp. nov.* p. 7 pl. 3 f. 44; *A. (L.) devians canaliculata* Is. Guimaras, Philippines *subsp. nov.* p. 7 pl. 3 f. 39 (Mlddf. nom. nud.), *A. (L.) devians robusta* Is. Siquijor, Philippines *subsp. nov.* p. 8 pl. 3 f. 38 (Mlddf. nom. nud.), *A. minutior duplicata* Is. of Masbate, Philippines *subsp. nov.* p. 8 pl. 3 f. 34 (Mlddf. MS.); *A. minutissima gracilior* Is. Negros, *subsp. nov.* p. 8 pl. 2 f. 31 (Mlddf. MS.); *A. simulabris ? latecostata* Is. Bohol, Philippines *subsp. nov.* p. 9, pl. 3 f. 42 (Mlddf. nom. nud.), A. Zilch Arch. Molluskenk. 32 1/3 1953.

Bellamyia of N.W. & S.W. Siam, F. Haas (2).

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Diplommatina (Sinica) salanomisiakensis *sp. nov.* Satanomisaki Japan, T. Habe Venus 17 4 1953 pp. 203, 204.

Diplommatina rotundata *sp. nov.* Indo-China, E. Saurin J. Conchyliol. Paris 93 4 1953 p. 114 pl. iv, f. 3a, b; *D. aculus gracillima* (Mlddf. nom. nud.) *var. nov.* Is. of Marinduque p. 18 pl. 8 f. 111; *D. a. minutior* *var. nov.* = *minima* Mlddf. nom. nud. 1898 non Beddome 1875, p. 19 pl. 8 f. 112; *D. cebuensis nematopleuris* *subsp. nov.* I. Bohol p. 20 pl. 6 f. 93 (Mlddf. nom. nud.); *D. cebuensis stenopleuris* *subsp. nov.* Mt. Mangilao, Zebu p. 20 pl. 6 f. 94 (Mlddf. MS.); *D. roebeleni rubellaria* *nom. nov.* for *rubella* Mlddf. 1894 non Beddome 1889, p. 22 pl. 7, f. 106; *D. rubellaria pallens* *subsp. nov.* Is. of Negros p. 22 pl. 7 f. 107 (Mlddf. MS.); *D. rupicola accrescens* *subsp. nov.* (Mlddf. nom. nud.) Uling, Zebu, p. 22 pl. 8 f. 116; *D. rupicola contractoides* *nom. nov.* = *contracta* Mlddf. 1893 non 1886 Tabog & Tigbao, Philippines, p. 22 pl. 8 f. 117-118; *D. rupicola pereziqua* *subsp. nov.* (Mlddf. nom. nud.) Vilar, Is. of Bohol, p. 23 pl. 8 f. 120; *D. rupicola pulchella* *subsp. nov.* (Mlddf. nom. nud.) Higakit Is. of Mindanao p. 23 pl. 8 f. 119; *D. tuberifera* *sp. nov.* Is. of Negros (= *perpusilla* Mlddf. 1898 nom. nud. non 1897) p. 23 pl. 8 f. 123; *D. (Sinica) aatarum* *sp. nov.* (Mlddf. nom. nud.) Is. Negros p. 24 pl. 9 f. 139; *D. (S.) aetarum vicina* *subsp. nov.* Guimaras Philippines (Mlddf. nom. nud.) p. 24 pl. 9 f. 140; *D. (Sinica) bicolor sticta* *subsp. nov.* (Mlddf. nom. nud.) Luzon p. 26 pl. 10 f. 154; *D. (S.) boettgeri aberrans* *subsp. nov.* (Mlddf. nom. nud.) Catanduanes, Philippines p. 26 pl. 10 f. 151; *D. (S.) boettgeri plectrophora* *subsp. nov.* Luzon (Mlddf. nom. nud.) Luzon I. p. 27 pl. 10 f. 150; *D. (S.) cyrtochilus mindoroensis* *subsp. nov.* (Mlddf. nom. nud. non Beddome 1875) Mindoro p. 29 pl. 11 f. 161.—*D. (S.) decipiens* *sp. nov.* (Mlddf. nom. nud.) Dalaguere, Zebu Id. p. 29 pl. 10 f. 142;

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†*Paludina (Viviparus) diluviana* of

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Cingula fulgida diagram of genital duct, **V. Fretter** (2).

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†*Hydrobia hoernesii* in sediments of R. Oslava, **M. Pokorný**.

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Tatea huonensis from Tasmania figs., **D. F. McMichael**.

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Io variation in a population during fifty years, **Lutz & Weese**.

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†*Kittlistylus alter* sp. nov., **O. Haas** Bull. Amer. Mus. Nat. Hist. 101 1953 p. 246 pl. 16 f. 42, 45, 46.

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Parastrophia asturiana de Folin occurrence and identity, plate, **B. S. Kisch**.

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†*Potomides* (*Uchauxia*) of *phillipsi* Leymerie in the Aptian and Neocomian, fig., **Badoux & Trümpy**.

†*Promathilda* (*Promathilda*) *subnodosoides* p. 187 pl. 12 f. 1-4, 8-16, 18-20, 22, 23, 37; *P. (P.) alia* p. 190 pl. 12 f. 17, 21, 24, 26, 27, 31-34; *P. (Teretrina) bolinoides* p. 192 pl. 12 f. 28-30, 38-50, 52; *P. (T.) intermedia* p. 197 pl. 12 f. 55-60, 62, 66-70, 73; *P. (T.) obtusa* p. 199 pl. 12 f. 64, 71, 72 pl. 13 f. 1-9, 11-18, 26; *P. (T.) eucycloides* p. 201 pl. 13, f. 10, 19-21, 27, 29; *P. (T.) tilarniocensis* p. 204 pl. 13 f. 22-25, 28, 31, 41; *P. (T.) terebraeformis* p. 205, pl. 13 f. 30, 32-40, 42, 53; spp. nov. — *Promathilda* (*Clathrobaculus*) *subulata* p. 208 pl. 13 f. 43-52, 59, 69; *P. (C.) gracillima* p. 209 pl. 13 f. 55-58, 64, 65; spp. nov. Mesozoic late Trias Peru, **O. Haas** Bull. Amer. Mus. Nat. Hist. 101 1953.

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†*Pyrgulifera* species of the Bear River formation, **T. C. Yen** (2).

†*Rhabdocolpus subulatus* p. 234 pl. 15 f. 76, 77, 80, 81, 85-88; *R. praeco* p. 237 pl. 16, f. 1-11, 13, 14, 27; *R. runsicostatus* p. 241 pl. 16 f. 12, 15-23, 25, 26, 33, 34; *R. emaciatus* p. 242 pl. 16 f. 24, 29, 31, 32, 35, 43, 44 **spp. nov.** Mesozoic late Trias Peru, **O. Haas** Bull. Amer. Mus. Nat. Hist. 101 1953.

Semisulcospira spp. and infection by *Cercaria* in Japan, **J. Ito**.

Stormsia **gen. nov.** Melaniidae for *Reymondia minima* E. A. Smith 1908, **E. Leloup** Rés. sci. Explor. Hydrobiol. Lac Tanganyika (1946-47) 3 4 1953 pp. 7, 217 pl. ix f. 3, 57GG, 72U, 100, 111 in text.

Thiara granifera an intermediate host of *Paragonimus* figs., **R. T. Abbott** (2).

†*Trochocerithium wadanum* (Yokoyama) Oligocene Japan, **H. Takeda** Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining 1953 p. 51 pl. iv f. 7, 11-13, **H. Takeda**.

Turbonilla elegantissima copulatory organs, sperm sac, figs., **V. Fretter** (2).

Turritella diagram of genital duct, **V. Fretter** (2).

Turritella orthosymmetra **sp. nov.** off Pebbly Beach, Santa Catalina Id., California, **S. S. Berry** Tr. S. Diego Soc. N.H. 11 16 1953 p. 412 pl. 28 f. 5.—*T. communis*, operculum figs. Radula, **J. E. Morton** (2).

†*Turritella poronaiensis* **sp. nov.** Oligocene, Japan, **H. Takeda** Coal Geology studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 50 pl. iv f. 6; pl. v f. 1-3, 5, 6.

Vermetus (*Thylacodes*) *fuscatus* (Sowerby) type in British Museum = *Serpula colubrina* "Bolten" [= Röding], **G. L. Wilkins** (2); *Vermetus*

(*Siphonium*) *maximus* (Sowerby) type in British Museum, **G. L. Wilkins** (2).

Vermicularia spirata, anatomy figs. Radula, **J. E. Morton** (2).

AMALTHEACEA

Hipponix antiquatus appearance and habits, **C. M. Yonge** (3).

CALYPTRAEACEA

Crepidula fornicata (L.) variation figs., **C. R. Boettger** (2); *C. fornicata* in Milford Haven, Cole and Baird.

Calyptraea sinensis on foot glands, **J. Touraine**.

Calyptraeidae—morphologic, histologic and function of filtration organs, figs., **B. Werner** (1).

STROMBACEA

†*Aporrhais* (*Tessarolax*) *antarctica* **sp. nov.** Lower Cretaceous Alexander I Land, **L. R. Cox** F.I.D.S. sci. Rep. No. 4 1953 p. 6 pl. 2 f. 9-11.

†*Aporrhais* (*Cuphosolenus*), **O. Haas** (2).

†*Dicroloma* (*Perissoptera*) *o'donnelli* **sp. nov.** Upper Cretaceous, Angola, **J. V. L. Rennie** Mem. jta Miss. geogr. colon. Geol. 1 1945 pp. 10, 54, 119, pl. iv f. 6.

†*Jurassiphorus icaunensis* **sp. nov.** Sequanian, Houdard & Delpy Bull. Soc. Sci. Hist. nat. Yonne 94 1948 p. 17 text-fig. 1 pl. 1 f. 2.

†*Jurassiphorus triadicus* **sp. nov.** Mesozoic late Trias Peru, **O. Haas** Bull. Amer. Mus. Nat. Hist. 101 1953 p. 252 pl. 16 f. 30, 40, 47.

†*Pellicaria mangasparia* pp. 35, 40 pl. 4 f. 8-10; *P. rotunda* pp. 35, 41 pl. 4 f. 5 and 7 **spp. nov.** Tertiary, East Wairarapa New Zealand, **P. Vella** Trans. roy. Soc. N.Z. 81 1 1953.—*Pellicaria* Tertiary species Wairarapa, New Zealand figs., **P. Vella**.

Rostellaria martini Marrat, Cebu Holotype figd., **W. K. Ford**.

Strombus galeatus Swainson type in British Museum, **G. L. Wilkins** (2).

†*Strombus bubonius* Lmk. from Tirenian of Gallipoli, plate, **G. Mirigliano**.

Xenophora konoi **sp. nov.** between Kyushu and Shikoku Japan, **T. Kuroda**

Ill. Catal. Jap. Shells No. 23 Ap. 1953 p. 176 f. 3-5.

Xenophoridae of Japan, T. Habe (1).

HETEROPODA

Pterotracheidae neuro-secretion, M. Gabe.

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†*Ampullina paquieri* sp. nov. Campanian France, J. Villatte Bull. Soc. Hist. nat. Toulouse 87 3-4 1952 pp. 317, 318 pl. 1 f. 1, 4.

†*Ampullospira rumignyense* p. 20 pl. ii f. 13-15; *A. cozi* p. 20 pl. ii f. 16-18 Bathonian, Ardennes, J. C. Fischer J. Conchyliol. Paris 93 1 1953.

Elachisina holotype of type species figured, Keen & Pearson.

†*Gyrodes semistriatus* sp. nov. Sequanian Roi-Chat, Houdard & Delpy Bull. Soc. Sci. Hist. nat. Yonne 94 1948 p. 21 text-fig. 5 pl. 1 f. 7.

†*Jedria* subgen. nov. of *Naticopsis* subgenotype *Naticopsis meeki* Knight 1933, E. L. Yochelson J. Wash. Acad. Sci. 43 3 1953 p. 65.

Natica (*Tectonatica*) *micra* sp. nov. Ilha Grande, Rio de Janeiro Brazil, F. Haas Fieldiana Zool. 34 1953 p. 206 text-fig. 41.—*Natica*, on the drilling mechanism, H. J. Turner jr.—*Natica maculosa* and method of boring into *Venerupis semidecussata*, Y. Tanaka (2).

Naticopsis (*Jedria* q.v.) subgen. nov. and discussion on conception of *Naticopsis*, E. L. Yochelson.

†*Naticopsis kaibabensis* sp. nov. Permian Arizona, H. Chronic Bull. Soc. Geol. Amer. 63 2 1951 p. 133 pl. 5 f. 10a-11b.

CYPRAEACEA

Cypraeidae of Akaba, Jordan, R. J. Griffiths.

Trivia europaea on foot glands, J. Touraine.

TONNACEA

Cymatium tuberosum on the egg clutch, C. Boullaire.

Distorsio mcgintyi nom. nov. for *Distorsio floridana* Olsson and McGinty 1951 Naut. 65 (1) p. 27 pl. 1 f. 5, 6, 9 not Gardner 1947 U.S. Geol. Surv.

Prof. Ppr. 142-H p. 532 pl. 53 f. 8, Emerson & Puffer Proc. biol. Soc. Wash. 66 1953 p. 101.

Distorsio [pars *Distortrix* Lmk.] *reticulata* Röding Indo-Pacific confused with *Distorsio 'clathrata'* (Lamarck 1822). This West Indian *Distorsio* should date from Lamarck's figures and name (1816) and not from his description of 1822 figs., E. L. Puffer.—*Distorsio* Catalogue of synonymies, supraspecific units and species, Emerson & Puffer.

Personella Conrad 1865 a catalogue of species (with *Distortio*), Emerson & Puffer.

Septa nodifera Lk. citric acid content, P. V. Creac'h (1, 2).

PTENOGLOSSA

EPITONIACEA

†*Acirsa* (*Plesioacirsa* ?) *egitoensis* sp. nov. Upper Cretaceous, Angola, J. V. L. Rennie Mem. jta Misc. geogr. colon. Geol. 1 1945 pp. 10, 49, 114 pl. iii f. 52-54.

Clathrus clathrus genital organs figs., V. Fretter (2).

†*Confusiscala angolensis* sp. nov. Upper Cretaceous Angola, J. V. L. Rennie Mem. jta Miss. geogr. colon. Geol. 1 1945 pp. 10, 47, 113, pl. iii f. 50, 51.

Döderleinia berycoides ecological studies in S.W. Japan Sea, O. Kibesaki.

Janthina globosa biology and anatomy figs., J. Risbec (2).

AGLOSSA

PYRAMIDELLACEA

†*Aclisina* ? *bisulcata* sp. nov. Permian, Arizona, H. Chronic Bull. Soc. Geol. Amer. 63 2 1951 p. 132 pl. 5 f. 5a-6.

†*Coelostylina cylindrata* p. 132 pl. 7, f. 79, 80, 88-91, 99, 100; *C. inexpectata* p. 134 pl. 7, f. 86, 87, 93-98; spp. nov. Mesozoic, late Trias, Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953.

Cythinia holotype of type species figured, Keen & Pearson.

Enteroxenos bouvieri sp. nov. Entoconchidae, New Caledonia, J. Risbec Bull. Soc. zool. Fr. 78 1953 p. 120 text-figs.

Entocolax chiridotae sp. nov. body cavity of *Chiridota pellucida* Vahl. Japan Sea, La Pérouse Straits, O. A. Skarlato Zool. Zh. Moscow 30 4 1951 p. 358 4 figs.

Niso hendersoni sp. nov. from 111 fms. between the Mississippi delta and Cedar Keys on mud bottom, P. Bartsch Nautilus Philad. 67 2 1953 p. 38 pl. 5 f. 4.

†*Onchochilus insolitus* sp. nov. Permia Arizona, H. Chronic Bull. Soc. Geol. Amer. 63 2 1951 p. 132 pl. 5 f. 7.

†*Pseudomelania salinasensis* pp. 9, 46, 112, pl. iii f. 47, 48; *P. egitoensis* pp. 10, 45, 110 pl. iii f. 45, 46: spp. nov. Upper Cretaceous Angola, J. V. L. Rennie Mem. jta. Miss. geogr. colon. Geol. 1 1945.

†*Pustulifer peruvianus* sp. nov. Mesozoic, Late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953 p. 148 pl. 9 f. 20-24.

Pyramidella Lamarck 1799 proposed validation of the name, Rehder & Forcart.

†*Ramina andina* sp. nov. Mesozoic, late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953 p. 110 pl. 5 f. 78-81, 86-89, 93, 96-98.

†*Spirostylus peruvianus* sp. nov. Mesozoic, late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953 p. 154 pl. 9 f. 11-17.

Stilifer pisum sp. nov. Stiliferidae, Tosa Bay Shikoku, Japan, T. Habe Venus 17 3 1953 pp. 134 & 143 text-fig. 20.

LOXONEMATACEA

†*Omphaloptycha jaworskii* nom. nov. p. 137 pl. 8 f. 1-28, 31: *O. jenkei* p. 142 pl. 8 f. 29, 32-34, 38, 39, 42; *O. speciosa* p. 143, pl. 8 f. 30, 35-37, 40, 41, 45-50, 53, 54, 59, 62, 65; ? *O. cacuana* p. 146, pl. 8 f. 43, 44, 51, 52, 57; spp. nov. Mesozoic, late Trias, Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953.

†*Protostylus* Mansuy 1914 genotype here fixed as *P. lantenoisi* Mansuy, R. L. Batten J. Wash. Acad. Sci. 42 11 1952.

STENOGLOSSA

(α) RACHIGLOSSA

MURICACEA

Acanthina calcar Martyn a turriculate example figs., F. Riveros-Zuñiga (1).

Agnewia tritoniformis (Blainville) its distribution in New Zealand figs. text-map and list of records, E. S. Richardson.—*A. kempae* Powell 1934 figs., E. S. Richardson.

Columbariidae of Japan, T. Habe (1).—Columbariidae of Japan, T. Kuroda (1).

Colus Humphrey 1797 type *Murex colus* L. Mus. Calon. 34; The genus discussed, B. C. Cotton.

Coralliobia fimbriata (R. Adams) Concholepas (Coralliobia) Ad. P.Z.S. 20 1852 93 Loo Choo (Ryukyu or Okinawa group), T. Kuroda Venus 17 3 1953 pp. 117, 128.

Coralliofusus acus gen. et sp. nov. Rapidae, off Tosa Japan, T. Kuroda p. 119; *C. (Genkaimurex)* subgen. nov. *varicosa* sp. nov. Genkai Sea p. 120 figs. 7, 8, T. Kuroda Venus 17 3 1953.

Coralliophila (Genkaimurex) varicosa subgen. et sp. nov. (Rapidae) Genkai Sea off Fukuoka, Kyushu, Japan, ? 25 fms., T. Kuroda Venus 17 3 1953 pp. 117, 120, 127 text-figs. 7, 8.

Cytharomorula vexillum gen. et sp. nov. Muricidae the genus resembles *Ergalatax* Iredale, Rec. Aust. Mus. 18 (4) 1931 231, off Kii and Tosa deep bottom, T. Kuroda Venus 17 4 1953 pp. 183, 184, 191 text-figs. 11.

Genkaimurex subgen. nov. of *Coralliofusus* [q.v.] subgenotype *varicosa* sp. nov. Genkai Sea, Japan, T. Kuroda Venus 17 3 1953 p. 120 figs. 7, 8.

Leptoconchus noumeae sp. nov. Coralliphilidae in coral blocks, Noumea, J. Risbec Bull. Soc. zool. Fr. 78 1953 p. 117 text-figs.

Murex trunculus biochemical research on the egg capsule, Dulsetto & Labruto; *M. tribulus* from W. shores of Great Bitter Lake S. of Fayid, M. Taylor; *M. bicolor* Val. in Florida, M. M. Teare (2); *M. briskasi* sp. nov. Dominica, B.W.I., A. H. Verrill Mins. Conch. Club S. Calif. 127 May-June 1953 p. 2 text-fig.—*M. regius* Swainson type in British Museum, G. L. Wilkins (2).

Nucella, diagram of genital duct, V. Fretter (2).—*Nucella lapillus* on foot glands, J. Touraine.

Ocenebra crispatisima sp. nov. 33 fms. off Isthmus Cove, Sth. Catalina Id., S. S. Berry Trans. S. Diego Soc. N.H. 11 16 1953 p. 414 pl. 28 f. 6.—*O. erinacea* on foot glands, J. Touraine.

Pleuroploca eucla sp. nov. West Australia 60 miles W. of Eucla 72 fms., B. C. Cotton Trans. roy. Soc. S. Aust. 75 1952 p. 52 pl. iv f. 1-3.

Polytropha a discussion on the generic name and species, E. P. Chace (1).

Rhizochilus teramachii sp. nov. sea adjacent to Shikoku, Pacific side Japan off Ashizuri-misaki, T. Kuroda Venus 17 3 1953 pp. 117, 118, 125 text-figs. 1, 2.

Takia gen. nov. Pacific side of Japan with *Murex incensis* Sav. as type, T. Kuroda Venus 17 4 1953 pp. 179, 190 text-figs. 6, 7, 10.

Trophon delicatus S.E. of Ishinomaki, east coast of Honshu 146 m. fig. 2; *T. polycyma* W. of Izu Peninsula, Suruga Gulf 188 m. fig. 1; *T. crystallinus* off Miyako east coast of Honshu, 177 m. figs. 3, 4: spp. nov. Japan, T. Kuroda Venus 17 4 1953.

Trophonopsis delicatus p. 186 text-fig. 2, S.E. of Ishino-maki east coast of Honshu; *T. polycyma* p. 187 text-fig. 1, W. of Izu Peninsula, Suruga Gulf, Japan; *T. crystallinus* p. 188 text-figs. 3, 4, off Miyako, east coast of Honshu 177 m. spp. nov., T. Kuroda Venus 17 4 1953.

BUCCINACEA

†*Ancistrolepis* p. 11, *Ancistrolepis* p. 56 & plate japonicus sp. nov. Oligocene, Japan, H. Takeda Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 56, pl. i f. 1, 3, 5-7.

Babylonia japonica Reeve age determination based on operculum, and economic uses, Kubo & Kondo.

Buccinum undatum on foot glands, J. Touraine.

Busycon canaliculatum and carica selection of prey and methods of penetration of bivalves, M. R. Carriker. —*Busycon* Röding and its subgeneric nomenclature, W. K. Emerson (3).

Nyanassa eggs, the mesoderm question, C. Clement (1).—*Nyanassa* ova experiments, A. C. Clement (2).

Mitrella kanamaruana sp. nov. off Tosa, Pacific side of Japan, T. Kuroda Venus 17 4 1953 pp. 179, 182 text-figs. 12, 13.

†*Molopophorus kusiroensis* sp. nov. Oligocene, Japan, H. Takeda Coal Geol. Studies No. 3 Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 57 pl. iv f. 5, 9, pl. v f. 4, 14.

Nassa reticulata on foot glands, J. Touraine.

Nassarius (*Schizopyga*) *rhineros* sp. nov. 40 fms. off Moss Landing, Monterey Bay, California, S. S. Berry Trans. S. Diego Soc. N.H. 11 16 1953 p. 415 pl. 28 f. 7.

Neptunea arthritica Bernardi spawning, M. Miyawaki.

†*Neptunea ezoana* p. 52 pl. ii f. 1, 3, 6; *N. modestoidea* p. 53 pl. iii f. 1-7 pl. v f. 8; *N. dispar* p. 55 pl. i, f. 2, 4, 8-12; spp. nov. Oligocene, Japan, H. Takeda Coal Geol. Studies No. 3 Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953.

Pisania maculosa on the foot glands, J. Touraine.

†*Pseudoneptunea sindonata* Auversian Bracklesham Beds of Huntingbridge, Hants p. 129: *P. venablesi* Astarte bed of the London Clay, Bognor p. 129, p. 14, 15 spp. nov., A. Wrigley Proc. Malac. Soc. London 30 4/5 1953.

Pseudoneptunea of the English Eocene, A. Wrigley.

Siphonalia of the English Eocene, A. Wrigley.

†*Siphonalia praedeclivis* sp. nov. Kuranowa Sandstone, Miyazaki Prefecture, Kyushu, Japan (Upper Miocene), J. Itoigawa Venus 17 4 1953 pp. 215, 217 text-figs. 1, 2.—*Siphonalia highgatensis* nom. nov. (for *Murex tuberosus* J. Sowerby 1819 non Dillwyn 1817) p. 124 f. 5, 6; *S. ferroviae* London Clay of Highgate Tunnel p. 125 f. 7, 8; *S. londinensis* London Clay near Chalk Farm p. 125 f. 11; *S. cooperi* Oldhaven Sands, Bishopstone, E. of Herne Bay, p. 127 f. 9, 10: "*Siphonalia*" suburban London Clay near Chalk Farm, p. 127

f. 13: spp. nov., **A. Wrigley** Proc. Malac. Soc. London 30 4/5 1953.

VOLUTACEA

Agaronia murrha sp. nov. Corinto, Nicaragua, **S. S. Berry** Trans. S. Diego Soc. N.H. 11 16 1953 p. 417 pl. 29 f. 1 text-fig. 5.

Amoria (Amoria) grayi nom. nov. (for *Voluta pallida* Gray 1834 non Linne 1767) p. 136 pl. 14 f. 4, 5: *A. (Amoria) keatsiana* nom. nov. (for *Voluta (Amoria) gatliffi* Sowerby 1910 non Pritchard 1898) p. 138 pl. 18 f. 9, **N. H. Ludbrook** Proc. Malac. Soc. London 30 4/5 1953.

Amoria a systematic revision of the genus, figs., **N. H. Ludbrook** (2).

Aurinia kieneri ethelae subsp. nov. aff. South Pass, Mississippi River 220 fms. Holotype in col. Mrs. E. L. Townsend, Coconut Grove, Florida, **Pilsbry & Olsson** Nautilus 67 1 1953 p. 10 pl. 3 f. 1, 2, 2a.

Aurinia H. & A. Adams monotype *Voluta dubia* Broderip, Distribution Southeast Atlantic coast of United States, Florida and the West Indies synonymous *Rehderia* Clench 1945; *Auriniopsis* Clench 1953, **Pilsbry & Olsson** (2).

Biomphalaria alexandrina pfeifferi (Krauss) introduced into Africa, **D. T. de Lucena**.

Clenchina gen. nov. Scaphellinae Volutidae genotype *Voluta dohrni* Sowerby 1903, **Pilsbry & Olsson** Nautilus 67 1 1953 4.

Clenchina robusta marionae subsp. nov. "Gulf of Mexico" type ANSP 189920, **Pilsbry & Olsson** Nautilus 67 1 1953 p. 8 pl. 2 f. 4, 5.

Cymbium umbilicatum (Broderip), *C. miltonis* (Gray), types in British Museum, **G. L. Wilkins** (2).

Ericusa orca sp. nov. West Aust. 90 miles W. of Eucla 100 fms., **B. C. Cotton** Tr. roy. Soc. S. Aust. 75 1952 p. 53 pl. iv f. 4-6.

Mitra belcheri Hinds occurrence off La Paz, Lower California, **J. Burch** (1). —*M. osterguardi* **Pilsbry** Kwajalein Atoll, Marshall Ids., **Dietrich & Morris**.

Oliva, on notes by **J. R. le B. Tomlin** on Marrat's species, **W. K. Ford** (2); *O. oblonga* Marrat S. America, holotype figured, **W. K. Ford** (2). —*O. peruviana* Am. Mus. xvi, 28, 317, *senegalensis* Lmk. Ency. Meth. pl. 364 f. 3, *fulgurata* Martens Mal. Bl. 221 1869, *coniformis* Phil. Abb. & Besch. *Oliva* p. 3 Nr. 5 t. 1 f. 5-7, **F. Riveros-Zuñiga** (2). —*O. peruviana* Lmk. Conchometrical notes, synonymy, **F. Riveros-Zuñiga** (2).

†*Psephaea (Neopsephaea) antiquior* sp. nov. Oligocene Japan, **H. Takeda** Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 59 pl. iv f. 1-4, 10; pl. v f. 7.

Scaphella Swainson 1832 type s.d. Gray 1847 *Voluta junonia* Shaw—distribution Florida coasts westward into the Gulf of Mexico, **Pilsbry & Olsson** (2).

†*Tridicla japonica* sp. nov. Oligocene Japan, **H. Takeda** Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 58 pl. ii f. 13-15.

Turbinella pyrum on the food value, **R. Venkataraman & S. T. Chari** (1).

Voluta musica alfordi p. 4, text-fig.; *V. m. tobagoensis* p. 5, text-fig.; subspp. nov. Tobago, **A. H. Verrill** Mins. Conch. Club S. Calif. 134 Dec. 1953.

Volutidae of East Coast of America and Florida, material for a revision, **Pilsbry & Olsson** (2).

Volutifusus Conrad 1863 type by monotypy *Fasciolaria mutabilis* Conrad 1834 (Miocene); synonymy *Bathya-aurinia* Clench & Aguayo 1940, **Pilsbry & Olsson** (2).

Xancus pyrum food value of edible portion, **Venkataraman & Chari** (1).

STENOGLOSSA

(β) TOXOGLOSSA

CONACEA

Antiplanes (Rectiplanes) willetti 50 fms. off Forrester Island S.W. Alaska, **S. S. Berry** Tr. S. Diego Soc. N.H. 11 16 1953 p. 419 pl. 29 f. 2.

Bathytoma (= *Dolichostoma* Bellardi 1875 non Hope 1839) belongs to subfamily Conorbiinae (Turridae), **K. Oyama**.

†*Clavatulula* (*Surcula*) *consobrina badensis* subsp. nov. p. 11 pl. i f. 7-8; *C. lethensis* p. 13 pl. ii f. 13-14; *C. (Surcula) krenneri* p. 13 pl. ii f. 17-18; spp. nov. Middle Miocene Hungary, **M. I. Csepregyhyné** (1) Ann. hist. nat. Mus. hung. N.S. 4 1953.

Conus frisbeyae sp. nov. Campeche Banks, Yucatan, Mexico 23 fms., **Clench & Pulley** Texas J. Sci. 4 1 1952 p. 59 pl. A f. 1.—*C. rainesae* sp. nov. dredged in a shrimp 60 fms. 150 m. N.E. of Progreso, Yucatan, Mexico, **T. McGinty** Notulae nat. Acad. N.S. Philad. No. 249 1953 p. 1, 2 figs.

†*Cyathara* (*Mangelia*) *vulpecula polonica* subsp. nov. p. 16, pl. iii f. 8-9; *C. (M.) kontensis* sp. nov. p. 17 pl. iii f. 1, 2: Middle Miocene Hungary, **M. I. Csepregyhyné** (1) Ann. hist. nat. Mus. hung. N.S. 4 1953.

†*Drillia granaria szobensis* subsp. nov. Middle Miocene Hungary, **M. I. Csepregyhyné** (1) Ann. hist. nat. Mus. hung. N.S. 4 1953 p. 8 pl. i f. 15-16.

Etrempa gen. nov. Turridae Mangelineae Type (Orthotype) *Drillia subauriformis* E. A. Smith, **K. Oyama** Venus 17 3 1953 p. 155.

Etrempa gen. nov. for *Drillia subauriformis* Sm.; *D. streptonotus* Pilsbry; *Defrancia texta* Dhr.; *Pleurotoma scalarina* Desh.; *Etrema saigoensis* Makiyama; *Clathurella guinesi* Pils.; **K. Oyama** (3).

Ithythythara hyperlepta sp. nov. Ilha Grande, Rio de Janeiro, Brazil, **F. Haas** Fieldiana Zool. 34 1953 p. 207 text-fig. 42.

Iwaoca reticulata gen. et sp. nov. Turridae of deep sea forms off Tosa, Pacific side of Japan, **T. Kuroda** Venus 17 4 1953 pp. 179, 180 text-figs. 9, 9a.

Knefastia princeps sp. nov. 20 fms. pebble, mud and shell bottom, 2 miles N. of Cedros Village, Cedros Id., Baja, California, **S. S. Berry** Trans. S. Diego Soc. N.H. 11 16 1953 p. 420 pl. 29 f. 3 text-fig. 7.

Megasurcula siogamensis (Nomura); *M. kurodai* (Otuka); *M. cryptoconoides* (Makiyama); *M. yokoyamai* (Otuka); *M. elongata* (Hatai); *M. rara* (Nomura & Onisi), **K. Oyama** (4).

†*Moniliopsis* (*Bathytoma*) *cataphracta orientalis* subsp. nov. Middle Miocene

Hungary, **I. Csepregyhyné** (1) Ann. hist. nat. Mus. hung. N.S. 4 1953 p. 16 pl. iii f. 19-20.

Nototerebra flindersi sp. nov. S. Australia, Beachport 100 fms., **B. C. Cotton** Trans. roy. Soc. S. Aust. 75 1952 p. 41 pl. iii f. 4.

†*Paleopsephaea o'donnelli* sp. nov. Upper Cretaceous, Angola, **J. V. L. Rennie** Mem. jta. Miss. Geogr. colon. Geol. 1 1945 pp. 10, 58, 123 pl. iv f. 12.

Pervicacia subplicata Backstairs passage 20 fms. f. 3: *P. helenae* Eyre Peninsula Farne Beach, Coffins Bay f. 1: spp. nov. Australia, **B. C. Cotton** Trans. roy. Soc. S. Aust. 75 1952 p. 40 pl. iii.

Pseudoetrema gen. nov. Turridae Mangelineae, Type (orthotype) *Drillia fortilirata* E. A. Smith, **K. Oyama** Venus 17 3 1953 p. 154.

Ringukdrillia Oyama 1951 belongs to subfamily Conorbiinae (Turridae), **K. Oyama** (3).

†*Spirotropis* (*Antiplanes*) *rugosa* sp. nov. Oligocene Japan, **H. Takeda** Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 61 pl. v f. 9.

†*Turris salinasensis* sp. nov. Upper Cretaceous, Angola, **J. V. L. Rennie** Mem. jta. Miss. geogr. colon. Geol. 1 1945 pp. 9, 59, 124 pl. iv f. 13.

Opisthobranchiata

Opisthobranchiata bioluminescence Chapter viii, **E. N. Harvey**.

BULLACEA

†*Acera* p. 10, *Akera* p. 61 and plate, *choffati* sp. nov. Upper Cretaceous, Angola, **J. V. L. Rennie** Mem. jta. Miss. geogr. colon. Geol. 1 1945 pp. 10, 61, 127 pl. iv f. 17, 18.

Acteon tornatilis L. anatomy of the digestive canal, figs., **Gabe & Prenant** (1).—*A. tornatilis* L. some histological data, figs., **Gabe & Prenant** (2).

†*Acteocina lajonkaireana ventricosa* pp. 83, 105 pl. 20 f. 97-98; *A. l. maxima* pp. 83, 106 pl. 20 f. 99, 100; subspp. nov., *A. heracitica* sp. nov. pp. 83, 106 pl. 18 f. 65-71: Tertiary Vienna, **W. Berger** Arch. Mollusk. 82 4/6 1953.

Aglaja minuta sp. nov. Témara, A. Pruvot-Fol Trav. Inst. sci. Chérifien No. 5 1953 p. 30 pl. ii f. 28-30 text-fig. v.

†*Alys (Alicula) lapugyensis* sp. nov. Tertiary Vienna, W. Berger Arch. Mollusk. 82 4/6 1953 pp. 83, 86 pl. 19 f. 88, 89 text-fig. 1.

Chelidonura africana sp. nov. Dakar; Témara; A. Pruvot-Fol Trav. Inst. sci. Chérifien No. 5 1953 p. 31 pl. iii f. 37-39 text-fig. vi.

†*Consobrinella* gen. nov. of Acteonidae genotype *Consobrinella elegantula* sp. nov. Mesozoic late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953 pp. xi, 279, 280 pl. 18 f. 62-78.

†*Cosmophilina* gen. nov. Philinidae *marinellii* sp. nov. Tertiary Vienna, W. Berger Arch. Mollusk. 82 4/6 1953 pp. 84, 115 pl. 18 f. 87.

†*Cylichna (Cylichna) subbacillus* sp. nov. Tertiary Vienna, W. Berger Arch. Mollusk. 82 4/6 1953 pp. 84, 110 pl. 18 f. 74.—*C. multistriata* sp. nov. Oligocene, Japan, H. Takeda Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 61 pl. ii f. 10, 11.

†*Cylindrobullina (Cylindrobullina) vespertina* p. 258 pl. 17 f. 1-34, 37, 38, 45, 47, 48; *C. (C.) avenoides* p. 261 pl. 17 f. 35, 36, 39-42, 46, 49-51, 58, 59; *C. (? C.) obtusa* p. 264 pl. 17 f. 54-57, 60-63, 65, 66, 70, 71, 75, 76, 79-82, 86; *C. (? C.) pyrulaeformis* p. 266 pl. 17 f. 67-69, 72-74, 84, 85; *C. (? C.) tenuicostata* p. 268 pl. 18 f. 3-8; *C. (Conactaeon) peruviana* p. 269 pl. 18 f. 1, 2, 9-16, 18-22; *C. (? Co.) tilarniencensis* p. 274 pl. 18 f. 32-37, 44, 45, 48; *C. (Euconactaeon) tambosolensis* p. 277 pl. 18 f. 40-43, 46, 47, 49-52, 59-61; *C. (E.) ninacacana* p. 278 pl. 18 f. 53-58 spp. nov. Mesozoic late Trias Peru, O. Haas Bull. Amer. Mus. Nat. Hist. 101 1953.

Haminaea antillarum guadalupensis Sow. infected by a new species of *Cercaria*, W. H. Leigh.—*H. gantesae* sp. nov. Témara, A. Pruvot-Fol Trav. Inst. sci. Chérifien No. 5 1953 p. 27 pl. 11 f. 31.

†*Haminea (Haminea) hydatis mio-caenica* subsp. nov. Tertiary Vienna, W. Berger Arch. Moll. 82 4/6 1953 pp. 83, 87 pl. 16 f. 5, 7.

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sjöstedti sp. nov. p. 39 pl. 1 f. 3a-d, pl. 3 f. 4a-d map 3 tab. 4 p. 40 Cameroun, Ngolo Ndlan; *P. ghesquieri* sp. nov. p. 43 pl. 1 f. 4a-c, pl. 3 f. 5a-c map 2 tab. 5 p. 42 Belgian Congo, Prov. Coquilhatville: L. Forcart Ann. Mus. Congo Belg. 23 1953.

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SCAPHOPODA

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Pelecypoda or Lamellibranchia

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+*Fordia edulis* p. 48 pl. vi f. 13, 15: pl. vii f. 3-4; *F. edulis* p. 76 pl. vi f. 23, 24 pl. vii f. 3-4: spp. nov. *F. sp. form. edulis* p. 76: *F. sp. form. novus* p. 71. Permian formation, Honshu, Japan. H. Takeda, *Geol. Studies* No. 3 Geol. Soc. Honshu Assoc. Geol. Mining Technology 1953.

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Arcommaniculus subsp. nov. Hachijima, Japan, Hatai, Niino & Kotaka J. Tokyo Univ. Fish. 39 1952 p. 108 text-figs. 2, 10.

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+*Mytilus brenderensis* sp. nov. Tertiary East Greenland, M. Y. Hassan Medd. Greenland 111 5 1953 p. 29 pl. D f. 1-2.

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†*Volsella sacculifer* sp. nov. San Pedro Harbour, California, **S. S. Berry** Trans. San Diego Soc. nat. Hist. **11** 16 1953 p. 407 text-fig. 1 pl. 28 f. 1, 2.

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†*Aviculopinna sagitta* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. **63** 2 1951 p. 141 pl. 6 f. 10.

†*Bakevellia prora* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. **63** 2 1951 p. 142 pl. 7 f. 10.

Buchia Rouillier 1845 has priority over *Aucella* Keyserling 1846, **L. R. Cox** (1).

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†*Margaritifera margaritifera* (L.) in the Conifer beds of Ekoda, Tokyo, **H. Ozaki**.

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†*Pseudauccella marshalli* (Trechmann) in the Ururoan Stage (Toaraian, Lower Jurassic) Waimana Gorge, Taneatua, N.Z., **C. A. Fleming** (2).

PECTINACEA

†*Amusium* p. iii, *Amussium* p. 73 (*Propeamussium*) *kusiroense* sp. nov. Oligocene Japan, **H. Takeda** Coal Geol.

Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 73 pl. vi f. 7, 8.

Chlamys septemradiata (Müller) and deep water epifauna of the Clyde Sea Area, figs., **J. A. Allen** (1).—*C. varia* L., **P. Lubet** (2).—*C. opercularis* ecological notes, fig., **A. Schloemer**.—*C. opercularis*, form and mechanical properties of the ligament, figs., **E. R. Trueman** (3).

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†*Lima tricineta* sp. nov. Eocene, Ocala limestone U.S.A., **G. D. Harris** Bull. Amer. Paleont. **33** 138 1951 p. 11 pl. 5 f. 6.

†*Lima* (*Acesta*) *j-suzukii* p. iii, *L. (Acesta) j-suzukii* p. 75 & plate sp. nov., **H. Takeda** Coal Geol. Studies No. 3, Geol. Sec. Hokkaido Assoc. Coal Mining Technology 1953 p. 75 pl. xiii f. 1-4.

†*Neithea salinasensis* pp. 9, 10, 30, 95, pl. ii f. 8; *N. moutai* pp. 10, 29, 94 pl. ii f. 6, 7; spp. nov. Upper Cretaceous Angola, **J. V. L. Rennie** Mem. jta Miss. geogr. colon. Geol. **1** 1945.

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Pecten ecological notes relative to occurrence and probable necessity of good oxygen supply, **K. Oyama** (1).—*Pecten*, on the mechanical properties of the ligament, **E. R. Trueman** (1).—*Pecten* ecological studies on cultivation, **G. Yamamoto** (1).—*P. glyptus* Verrill figured, **Clench & Pulley**.—*P. irradians* and living *Polydora ciliata* at Woods Hole, **H. L. Plaine**.—*P. maximus* form and mechanical properties of the ligament, figs., **E. R. Trueman** (3).—*P. maximus*, *P. opercularis*, *P. varius*, *P. jacobus*, *P. flexuosus* on the eyes and light reaction, **Buddenbrook & Moller-Rache**.—*P. maximus* tagging in Ireland, **F. A. Gibson**.—*P. maximus* shell composition, **Roche, Ranson & Eysseric-Lafon**.—*P. yessoensis* Jay, ecology tables & graphs, **G. Yamamoto** (3).—*P. yessoensis* Jay maturation and ovulation of the ovarian eggs, **G. Yamamoto** (2).

Pectinidae remarks on sex, **P. Lubet** (1).

†*Spondylus hollisteri* sp. nov. Eocene, Ocala limestone U.S.A., G. D. Harris Bull. Amer. Paleont. 33 138 1951 p. 8 pl. 2 f. 10, 11 pl. 3 f. 1-4.

†*Pecten pseudo-solarium* sp. nov. Tertiary Greenland, M. Y. Hassan Medd. Grønland 111 5 1953 p. 27 pl. C f. 5, 6.

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Crassostrea virginica food and feeding, H. C. Davis.—*C. virginica* (Gmel.) in Florida waters, Ingle & Dawson.—*C. virginica* temperature requirements for maturation of gonads, figs. & tables, Loosanoff & Davis (1).—*C. virginica* and hexamitiasis, Machin, Korrington & Hopkins.—*C. virginica* (Gmel.) rate of shell growth, Wilbur & Jodrey.

Gryphaea Lamarck, on the application of the generic name, P. Korrington (2).—*G.* observations on the type species of the genus, G. Ranson (3).—*G. angulata* shell composition, Roche, Ranson & Eysseric-Lafon.

†*Gryphaea sinzovi* Netsch. var. *kumarapensis* var. nov. Tertiary, Mangishlak, Russia, Kuznetsova, N. F. C.R. Acad. Sci. URSS. n.s. 82 1 1952 p. 143.

Heteranomia squamula (L.) in west Terschelling harbour, J. A. W. Lucas.

Ostrea seasonal setting in the James River and Chesapeake Bay—90 days from July 1–Oct. 1, J. D. Andrews (1); *Ostrea* an unusually large specimen, L. R. Brightwell; *Ostrea*, effects of Carbohydrates, graphs, Collier, Ray, Magnitzky & Bell; *Ostrea* and effects on the beds in Mississippi Sound and the Louisiana Marsh by the Bonnet Carré Spillway, G. Gunter (2); *Ostrea* spawning and setting relative to seasonal and environmental changes, R. M. Ingle; *Ostrea* larvae and spatfall in Oosterschelde, Holland, P. Korrington (1); *Ostrea* semiannual spawning of Northern oysters, Loosanoff & Davis (2); *Ostrea* ecological notes from Matsushima Bay, J. Oizumi; *Ostrea* effects of AlCl₃, T. E. Pulley (1); *Ostrea*, Bibliography relative to Biology and Culture, G. Ranson (1); *Ostrea*, effect of disease caused by *Dermocystidium*, Ray, Mackin & Boswell; *Ostrea* larval production and setting in the rivers Roach and Crouch during 1952, G. D. Waugh; *Ostrea* experiments, R. Yasugi.—*O. edulis* L. nutritive value of Adriatic specimens,

M. Krvarić.—*O. edulis* and hexamitiasis, Mackin, Korrington & Hopkins.—*O. edulis* and cellulolytic activity in the crystalline style, B. S. Newell.—*O. edulis* L. osmotic relations in contractile tissues, R. L. C. Pilgrim (1), (2).—*O. edulis*, shell composition, Roche, Ranson & Eysseric-Lafon.—*O. gigas* effects of gill removal on sexuality and growth, N. Egami (1).—*O. gigas* and sex reversal and change in chemical composition, N. Egami (2).—*O. gigas* criticism to Protandric theory, N. Egami (3).—*O. gigas*, studies on sexuality, N. Egami (4).—*O. gigas*, high mortality and its causes in Hiroshima Bay, Japan, T. Fujita.—*O. gigas*, Y. Kado (3).—*O. gigas* Thunberg and *O. rivularis* Gould, notes on spermatozoa and their similarity, Y. Tanaka (1).—*O. canadensis* Lk., *O. edulis* L., v. *hippopus* Lk., v. *cyrenusii* Payraudeau, *O. cochlear* Poli, *O. stentina* Payraudeau, *O. virginica* Gm. v. (*lusitanica* Osório), *O. (Gryphaea) angulata* Lk., Vilela, H. (2).—*O. circum-picta* Pilsbry action of Ca, Mg, and Na ions against K ion in heart pulsation, S. Hamada.—*O. lapereusi* on the nucleolus a chemical study, H. Kobayashi.—*O. knorrii* Voltz proposed validation of the trivial name, P. C. Sylvester-Bradley (2).—*O. madrasensis* Preston, sex change, K. V. Rao.—*O. virginica* spawning and setting relative to the lunar phases, Loosanoff & Nomeiko.

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Ostreidae of the Gulf, Caribbean and West Indian region, G. Gunter (1).

†*Pychnodonta caucasica* sp. nov. Miocene, Tarkhansk horizon, M. S. Zinovyev C.R. Acad. Sci. URSS n.s. 84 5 p. 1034.

TRIGONIACEA

†*Tregonia (Scabrotrigonia) borgesii* sp. nov. Upper Cretaceous Angola, J. V. L. Rennie Mem. jta Miss. geogr. colon. Geol. 1 1945 pp. 9, 27, 91 pl. ii f. 3-4.—*T. azammouri* sp. nov. Upper Cretaceous W. Morocco, M. Gigout Trav. Inst. sci. Chérifien No. 3 1951 p. 364 pp. xi f. 11-16.

UNIONACEA

Anodonta ciliated epithelial cells, fig., **L. G. Worley & ors.**—*Anodonta cygnea* (L.) its distribution having regard to gill structure, **H. H. Bloomer.**—*A. cygnea* L. osmotic relations in contractile tissues, **R. L. C. Pilgrim** (2).—*A. piscinalis* Nilss. *volgensis* var. nov. p. 126; *A. anatina* L. *petshorica* var. nov. p. 129 *lenae* var. nov. p. 129; *A. beringiana* Midd. *suifunensis* p. 132 *taranetzi* p. 133 vars. nov. Fauna USSR, **V. Shadin** Fauna USSR Leningrad N.S. 18 1938.

†*Anthracoisidae*—relative growth of shells, **R. M. C. Eagar** (1).

†*Carbonicola fallax* Wright, *C. protea* Wright, *C. exprorecta* Eagar, *C. discus* Eagar, *C. crispa* Eagar, variation from normal forms, figs., **R. M. C. Eagar** (1).

†*Ellipsis salissiensis* sp. nov. Tertiary Kishenehn formation S.E. British Columbia, **L. S. Russell** Bull. nat. Mus. Can. No. 126 1952 126 text-fig. pl. xvii f. 1, 2.

†*Lampsilis dalyi* sp. nov. Tertiary, Kishenehn formation S.E. British Columbia, **L. S. Russell** Bull. nat. Mus. Can. No. 126 1952 : 127 text-fig. pl. xvii f. 3-5.

Hyridella Sw. type *Unio australis* Lk. Freshwater species and varieties of New Zealand, figs., **R. K. Dell** (4).—*H. australis* chemical contents, **I. D. Hiscock**.

Hyriopsis schlegelii and carbonic anhydrase content, **D. K. Kawai**.

†*Isopristes* gen. nov. Cardiniidae genotype *Isopristes crassus* sp. nov. Upper Trias (Noric Stage) Atacocha Mine, Depm. of Pasco, Peru, **D. Nicol & W. T. Allen** J. Wash. Acad. Sci. 43 11 1953 pp. 344, 345 text-figs. 1-4.

Margaritana sachalinensis sp. nov., **V. Shadin** Fauna U.S.S.R. Leningrad N.S. 18 1938 p. 114 f. 37.

†*Protounio* gen. nov., **G. G. Martinson** p. 167.—†*Protounio cordiformis* nov. Shiregin-Gashun, north of Barun-Shire, Mongolia lower horizon of the upper Cretaceous (lower Senonian), p. 168.—†*Protounio mongolensis*, sp. nov. Shiregin-Gashun, north of Barun-Shire, Mongolia, lower horizon of the upper

Cretaceous (lower Senonian), p. 169. **G. G. Martinson** C.R. Acad. Sci. URSS n.s. 89 1 1953.

Unio pictorum, a giant example from Thoresby Park, Nov. 1952, 138 × 62 × 40 mm., plate, **G. W. Pitchford.**—*U. pictorum* L. *pygmaeus* var. nov. p. 78 *defectivus* subsp. nov. p. 79; *U. tumidus* Retz *bashkiricus* var. nov. p. 81; *kobeltianus* nom. nov. p. 82 = *tumidus* *okae* Kobelt 1911, nom. preoc. *moltchanovi* var. nov. p. 85 *fridmani* var. nov. p. 86; *U. crassus* Retz *ishmensis* var. nov. p. 90; *U. mingrelicus* Drouët *stevanianiformis* var. nov. p. 96; *U. lindholmi* sp. nov. p. 97 f. 29, **V. Shadin** Fauna U.S.S.R. Leningrad N.S. 18 1938.—*U. possidens*, the function of the digestive diverticula, **F. G. Zake**.

Unionidae haematological studies, **D. S. Dundee**; Unionidae of N.W. & S.W. Siam, **F. Haas** (2); Unionidae as hosts of *Ascarina* in Quebec Lake, **Humes & Harris**; Unionidae of Java, figs., **W. S. S. v. B. Jutting** (2); Unionidae used by Illinois Indians and determination of flow of stream about 500 B.C., **M. R. Matteson** (2); Unionidae of Dallas Co., Texas, ecological notes, **L. B. Read & K. H. Oliver**.

†Unionidae from a fluviatile quaternary deposit in Casablanca, **P. Jodot**; Unionidae in the Trias of the Connecticut Valley, **R. S. Lull**.

ASTARTACEA

†*Crassatella ocardia* sp. nov. Eocene Ocala limestone, U.S.A., **G. D. Harris** Bull. Amer. Paleont. 33 138 1951 p. 20 pl. 10 f. 1, 2, 3-4 ?

Cuna littoralis sp. nov. Ocean Beach Manly, N.S.W., **C. F. Laserson** Rec. Aust. Mus. 23 2 1953 p. 34 f. 2-2b.

Hamacuna radiata sp. nov. 14 fms. off Long Reef, N.S.W., **C. F. Laserson** Rec. Aust. Mus. 23 2 1953 p. 36 f. 6, 6a.

†*Kaibabella* gen. nov. Astartidae ? genotype *K. curvilenata* sp. nov. Permian Arizona, **H. Chronic** Bull. Soc. Geol. Amer. 63 2 1951 p. 150 pl. 10 f. 1a-4c.

Mesocuna gen. nov. Crassatellidae genotype *Mesocuna saza* sp. nov. 14 fms. off Long Reef, N.S.W., **C. F. Laserson** Rec. Aust. Mus. 23 2 1953 p. 36 f. 7, 7a.

Ovacuna gen. nov. Crassatellidae genotype *Cuna atkinsoni* Ten.-Woods, C. F. Laseron Rec. Aust. Mus. 23 2 1953 p. 34.

Volupicuna novacambria sp. nov. 6-9 fms. Sow and Pig Reef, Pt. Jackson, N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953 p. 35 f. 4, 4a.

CARDITACEA

Benthicardiella vitrea sp. nov. Shell sand Narrabeen, N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953 p. 41 f. 15, 15a.

Calvitium gen. nov. Condyllocardiidae type *Calvitium glabra* shell sand Gannamatta Bay, Pt. Hacking sp. nov. N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953 p. 46 f. 32-32b.

Cardita (*Venericardia*) *monodi* sp. nov. West Africa, M. Nicklès Bull. Mus. Hist. nat. Belg. 29 13 1953 p. 5 pl. 1 f. 3-6.

†*Cardita* ex gr. *subtrigonica* sp. nov. Wetsch Pestchani Mar. S. A. Zhuteev C.R. Acad. Sci. URSS n.s. 90 1 1953 p. 84.

Carditidae Nomenclatural notes, A. Chavan (2).

Condylocardia mernoi sp. nov. Cook Strait, New Zealand, R. K. Dell Trans. roy. Soc. N.Z. 79 3-4 1952 p. 412 pl. 84 f. 1.—*C. kunopia* shell sand Narrabeen p. 39 f. 10, 10a: *C. rotunda* shell sand Narrabeen p. 39 f. 11, 11a: spp. nov. N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953.

Condyllocuna meringa dredged off North Head, Port Jackson p. 40 f. 18, 18a: *C. minuta* shell sand Narrabeen p. 41 f. 14, 14a: spp. nov. N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953.

Micropolia gen. nov. Condyllocardiidae type *Micropolia typica* sp. nov. 30-35 fm. off Crookhaven p. 48 f. 33-33b: *M. jacksonensis* p. 48 6-9 fm. Sow and Pig Reef, Pt. Jackson f. 34-34b: *M. depressa* 6-9 fm. Sow and Pig Reef p. 48 f. 35-35b: *M. ovalis* 30-35 fms. off Crookhaven p. 49 f. 36-36b: *M. concentrica* mussel beds North Harbour, Port Jackson p. 49 f. 37-37b: *M. profundis* 30-35 fms. off Crookhaven p. 49 f. 38-38b: spp. nov. N.S.W., C. F. Laseron Rec. Aust. Mus. 23 2 1953.

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Fossil

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†*Arctocephalites* (*Cranocephalites*) *kochi* sp. nov. p. 80 pl. 15 f. 8a, b; *A. (C.) kochi pygmaeus* var. nov. p. 81 pl. 16 f. 5a, b; *A. (C.) kochi latus* var. nov. p. 82 pl. 16 f. 6a, b, Upper Bathonian East Greenland; *A. (C.) maculatus rusticus* var. nov. p. 83 pl. 16 f. 1-3; **D. T. Donovan** Medd. Grønland 111 4 1953.

†*Atractites pusillus* Hauer strontium content, Kulp, Turekian & Boyd.

†*Bactroceras latisiphonatum* sp. nov. Ordovician New South Wales, B. F. Glenister Aust. J. Sci. 15 3 1952 p. 90 text-figs.

†*Belemniterthis polonica* sp. nov. Callovian Poland, H. Makowski Palaeontologia Polon. 4 1952 p. 41 pl. viii f. 5 text-figs. 7-11.

†*Bisiphytes trechmanni* sp. nov. Upper Trias, Carnian bed, Hokonui Hills, New Zealand, B. Kummel Breviora 21 1953 p. 5 pl. 1 f. 1-3 text-fig. 2.

†*Bouleiceras arabicum* p. 262 pl. 15 f. 6, 8, 13, 14; *B. elegans* p. 264 pl. 15 f. 9, 11; spp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952.

†*Bramkampia steinckei* gen. et sp. nov. Thamboceratidae Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 282 pl. 23 f. 9, 10.

†*Cameroceras* = *Endoceras*, R. H. Flower (2).

†*Ceratites nodosus* Schloth Trias, fig. E. Kuhn-Schnyder.

†*Clydomphalites* subgen. nov. of *Micromphalites* subgenotype *clydomphalus* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 286, 287 pl. 26 f. 1-7, 9, pl. 28 f. 12 text-fig. 9.

†*Clydoniceras pseudodiscus* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 282 pl. 24 f. 8.

†*Conchylolithus* species named in Martin's "Petrificata Derbiensia" 1809 figs., J. S. Turner (1).

†*Cosmoceras* (*Spinicoscocer*) *arkelli* sp. nov. Callovian Poland, H. Makowski Palaeontologia Polon. 4 1952 40 pl. iv f. 10-12.

†*Damesites* gen. nov. (= *Kotoceras* Yabe MS.) type *Desmoceras damesi* Simbo Cretaceous Japan, T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942] pp. 24, 25.

†*Damesites semicostatus* (Yabe MS.) fig. 1h; *D. hetonaiensis* (Saito MS.) fig. 1g; Cretaceous Japan spp. nov., T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942] pp. 24, 27.

†*Desmoceras reynesianum* nom. nov. = *Ammonites obesus* Reynes 1876 non Stoliczka 1865, O. Haas Amer. Mus. Novit. No. 1561 1952 p. 4 f. 2, 11-13.

†*Desmoceras kossmati* pp. 24, 26 fig. 1a, *D. (Pseudouhligella) ezoana* pp. 24, 26 fig. 1b; spp. nov. Cretaceous Japan, T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942] pp. 24, 26.

†*Dhrumaites* gen. nov. of Clydoniceratidae genotype *D. cardioceratoides* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 288 pl. 25 f. 2, 8, text-fig. 10.

†*Diplomoceras lambi* sp. nov. Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953 p. 17 pl. ii f. 1-3 pl. iii f. 1.

†*Dichotomites gregerse* *paucicostatus* var. nov. Middle Valanginian East Greenland, D. T. Donovan Medd. Grønland 111 4 1953 p. 110 pl. 23 f. 1a, b.

†*Dorsetensia arabica* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 269 pl. 19 f. 3-12.

†*Eoschistoceras* gen. nov., V. E. Ruzhentzev C.R. Acad. Sci. U.R.S.S. N.S. 83 6 1952 p. 914.

†*Eoschistoceras turkestanicum* sp. nov. Turkestan ridge, south of the mountain Kara-tau, V. E. Ruzhentzev C.R. Acad. Sci. U.R.S.S. N.S. 83 6 1952 p. 914.

†*Epigonoceras glabrum problematica* var. nov. Middle Cretaceous (Neourakawan and Paleohetonaian) Japan, T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942] p. 672 f. 1.

†*Ermoceras* (*Telermoceras*) *coronata-forma* p. 274 pl. 19 f. 2; *E. (T.) splendens* p. 274 pl. 23 f. 1, 2, 8 text-fig. 7 pl. 30 f. 6; *E. (T.) reineckeoides* p. 274 pl. 20 f. 8, 9 text-fig. 7; *E. (Kosmermoceras) magnificum* p. 275 pl. 22 f. 1-4; *E. (K.) runcinatum* p. 276, pl. 20 f. 1, 2 pl. 21, f. 8-10 pl. 22 f. 8-11 text-fig. 7; *E. (K.) aulacostephanus* p. 276 pl. 22 f. 7; *E. (K.) strigatum* p. 277 pl. 23 f. 4, 6; spp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952.

†*Eryonnoceras philbyi* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 290 pl. 29 f. 1-3.

†*Eudoceras* redefinition = *Camero-ceras*, R. H. Flower (1).

†*Eutrophoceras simile* sp. nov. Nautilidae Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953 p. 40 pl. xii f. 4 pl. xiii f. 1-5.

†*Gaudryceras denseplicatum kawadai*, *G. tenuiliratum frequente*, *G. t. substriata*, *G. striatum lata*, *G. subcostatum* spp. in sched. Cretaceous Japan, T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942] p. 666.

†*Grypoceras* (*Grypoceras*) *bidorsatoides* (Kohen MS.); *G. (G.) aemulans* (Kohen MS.) p. 5 f. 2; spp. nov. Trias Salt Range p. 3 f. 1, B. Kummel Breviora 20 1953.

†*Gunnarites antarcticus monilis* p. 31, *G. bhavaniformis vegaensis* p. 33, *G. kalika gracilis*, *G. k. nana* p. 34, *G. pachys media* p. 35, *G. flexuosus transitoria* var. nov. *G. rotundus kalikaformis* p. 37, *G. r. compressa* p. 37; vars. nov.: *G. pachys* p. 35 pl. ix f. 1-3; *G. paucinodatus* p. 37 pl. vii f. 4a-d; spp. nov. Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953.

†*Hemisonneratia* (Breistroffer 1952) p. 153 proposed without diagnosis [here diagnosed] type species *Ammonites puzosianus* Orb. R. Casey Proc. Geol. Soc. London 1490 Sep. 1952 p. 135.

†*Jacobites crofti* sp. nov. Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953 p. 27 pl. iv f. 2-3.

†*Kepplerites* (*Seymourites*) *traillensis* sp. nov. p. 84 pl. 17 f. 1a, b, Lower Callovian, K. (S.) t. *convergens* var. nov. Lower Callovian East Greenland, D. T. Donovan Medd. Grønland 111 4 1953.

†*Magharina* gen. nov. genotype *Magharina magharensis* sp. nov. 'Ermoceras Beds, Gebel Maghara, Northern Sinai' presumed Upper Bajocian, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 307 pl. 30 f. 7, 8.

†*Maorites pseudobhavani* sp. nov. Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953 p. 25 pl. vi f. 7-9 pl. xi f. 2-4.

†*Metaplacenticerias subtilistriatum* (Jimbo), ontogeny, T. Matsumoto (1).

†*Micromphalites elegans* p. 286 pl. 26 f. 8 pl. 28 f. 3-5, 8 text-fig. 9; *M. vertebralis* p. 286 pl. 28 f. 11; *M. inter-*

medius p. 286 pl. 28 f. 6, 7, 9; *M. (Clydomphalites) clydocromphalus* p. 287 pl. 26 f. 1-7, 9 pl. 28 f. 12 text-fig. 9; spp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952.

Münsteroceras Hyatt 1884 proposed addition to "Official List of Generic Names in Zoology," A. K. Miller (1).

Nautiloids from the Cretaceous of Texas, B. Kummel (1).

†*Nejdia* gen. nov. Hammatoceratidae genotype *N. bramkampii* sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 266, 267 pl. 17 f. 5-7 pl. 18 f. 3-6 text-fig. 6.

Nejdia furnishi sp. nov. Jurassic Central Arabia, W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 268 pl. 17 f. 1, 2 text-fig. 6.

†*Neocrampedites greenlandicus* p. 113 pl. 23 f. 4a, b; *N. evolutus* p. 114 pl. 23 f. 3 a-d, spp. nov. Middle Valanginian East Greenland, D. S. Donovan Medd. Grønland 111 4 1953.

†*Neogrammites* gen. nov. Kossmaticeratidae, *N. kiliani* = *Grahamites skidegatensis* Kilian & Reboul non Whiteaves p. 27, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953.

†*Neogrammites kiliani* p. 27 pl. iv f. 4, 5; *N. taylori* p. 28 pl. iv f. 6 pl. xi f. 5 spp. nov. Upper Cretaceous Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953.

†*Neohibolites miyakoensis* p. 69 pls. v, vi, vii; *N. eguchii* p. 78 pl. v Lower Cretaceous Japan, T. Hanai Jap. J. Geol. Geogr. 23 1953.

†*Neophylloceras meridianum* sp. nov. Upper Cretaceous of Graham Land, L. F. Spath F.I.D.S. Sci. Rep. No. 3 1953 p. 4 pl. 1 f. 1 a, b.

Neophylloceras Skinaiza em. *compressum* pp. 674, 675 f. 1 (2); *N. helonaiense* pp. 674, 675 f. 1 (3) spp. nov.; *N. h. subtuberculata* var. nov. Cretaceous Japan, T. Matumoto Proc. Imp. Acad. Tokyo 18 [1942].

†*Normannites egyptiacus* sp. nov. presumed Upper Bajocian (Geol. Surv. Mus. Cairo), W. J. Arkell Phil. Trans. Roy. Soc. 236B 633 1952 p. 309 pl. 30 f. 1.

†*Oiophyllites* gen. nov. genotype *O. decipiens* sp. nov. Puzosiidae, Upper Cretaceous, Graham Land **L. F. Spath** F.I.D.S. Sci. Rep. No. 3 1953 p. 21 pl. iv f. 7-8.

†*Otohoplites* Steinmann "type species here designated [*Ammonites*] *raulinianus* d'Orbigny, **R. Casey** Proc. Geol. Soc. London 1490 Sep. 1952 p. 135.

†*Parajaubertella* gen. nov. Ammonoidea genotype *P. kawakitana* sp. nov. Tetragnonitidae, Cretaceous Japan, **T. Matumoto** Proc. Imp. Acad. Tokyo 18 [1942] pp. 666, 667, 668 fig. 2.

†*Patagiosites* gen. nov. type *P. patagiosus* Schlüter 1867 Pachydiscidae, **L. F. Spath** F.I.D.S. Sci. Rep. No. 3 1953 p. 38.

†*Perisphinctes jubailensis* sp. nov. Jurassic Central Arabia, **W. J. Arkell** Phil. Trans. Roy. Soc. 236B 633 1952 p. 292 pl. 29 f. 5 pl. 30 f. 2.

†*Phylloptychoceras* gen. nov. type *Phylloptychoceras zelandicum* Marshall 1926 Diplomoceratidae, **L. F. Spath** F.I.D.S. Sci. Rep. No. 3 1953 p. 18.

†*Platynautilus* gen. nov. Nautilidae genotype *Platynautilus tyōsiensis* sp. nov. Lower Cretaceous Inubō formation Tyōsi Peninsula, Kwantō region Japan, **H. Yabe & H. Ozaki** Bull. nat. Sci. Mus. Tokyo No. 32 1953 p. 57 pl. i f. 1-4.

†*Polyptychites* (*Polyptychites*) *undulatocostatus* sp. nov. p. 104 pl. 21 f. 5a, b; *P. (Euryptychites) traillensis* sp. nov. p. 107 pl. 21, f. 6a, b, pl. 22 f. 2a, b; *P. (E.) laevis* sp. nov. p. 109 pl. 22 f. 1 a-f, text-fig. 9; Middle Valanginian fossils, East Greenland, **D. T. Donovan** Medd. Grønland 111 4 1953.

†*Pseudophyllites peregrinus* sp. nov. Upper Cretaceous Graham Land, **L. F. Spath** F.I.D.S. Sci. Rep. No. 3 1953 p. 7 pl. f. 6-9.

†*Puzosia sigmoidalis* sp. nov. Lower Albian East Greenland, **D. T. Donovan** Medd. Grønland 111 4 1953 p. 115 pl. 24 f. 3-6 text-fig. 11.

†*Puzosia lytoceratoides* sp. nov. Albian, Angola, **O. Haas** Amer. Mus. Novit. No. 1561 1952 p. 8 f. 14-17.

Rayonnoceras periganteum p. 177 pl. viii Dumfriesshire; *R. shiphamsense* p. 178 pl. 11 f. 2, 4 Somerset; *R. progiganteum* p. 179 pl. vii f. 1, 2, Co.

Down; *R. millicentense* p. 179 pl. vii f. 4, 5 Co. Kildare; *R. burrousi* p. 180 pl. vii f. 3, 6 Yorkshire; *R. windmoreense* p. 180 pl. 11 f. 1, 7 pl. iii, pl. iv, f. 2-6 pl. v f. 1 Westmorland; *R. lowickense* p. 185 pl. ii, f. 8 Northumberland; *R. espeyense* p. 185 pl. ii f. 5, 6 pl. vi f. 1-3 Co. Down; *R. catonense* p. 186 pl. vi f. 4-7 Lancashire; spp. nov. Carboniferous Nautiloids Great Britain, **Turner** Trans. roy. Soc. Edinb. 60 1 1951.

Sandbergeroceras proposed acceptance vice *Sandbergeoceras*, with type *Goniates tuberculosocostatus* G. & F. Sandberger 1850, **A. K. Miller** (2).

†*Scaphites greenlandicus* sp. nov. Upper Campanian, East Greenland, **D. T. Donovan** Medd. Grønland 111 4 1953 p. 121 pl. 24 f. 9, 10.

†*Stephanoceras arabicum* sp. nov. Jurassic Central Arabia, **W. J. Arkell** Phil. Trans. Roy. Soc. 236B 633 1952 p. 270 pl. 20 f. 4-7.

†*Strungia* gen. nov. of Oppeliidae genotype *Oppelia redlichi* Popovici-Hatzeg 1905, p. 287; *S. arabica* sp. nov. p. 287 pl. 28 f. 2, Jurassic Central Arabia, **W. J. Arkell** Phil. Trans. Roy. Soc. 236B 633 1952.

†*Tetrahoplites* gen. nov. p. 134 [Hoplitidae] genotype *Sonneratia subquadrata* Sinzow 1907 with *Tetrahoplites orientalis* nom. nov. for *Sonneratia jachromensis* Sinzow 1907 non Nikitin p. 135, **R. Casey** Proc. Geol. Soc. London 1490 Sep. 1952.

†*Thambites* gen. nov. p. 279 Thamboceratidae genotype *Thambites planus* sp. nov. p. 280 pl. 23 f. 11 pl. 24 f. 1-6 text-fig. 8; *T. oxynotus* sp. nov. p. 281 pl. 21 f. 13; ? *T. avus* p. 281 pl. 24 f. 7; spp. nov. Jurassic Central Arabia, **W. J. Arkell** Phil. Trans. Roy. Soc. 236B 633 1952.

†*Thamboceras mirabile* sp. nov. Jurassic Central Arabia, **W. J. Arkell** Phil. Trans. Roy. Soc. 236B 633 1952 p. 278 pl. 19 f. 13, 14 pl. 30 f. 9.

†*Tissotia* of the Lower Senonian, Algeria, **C. W. Drooger**.

†*Tragodesmoceroide* gen. nov. for *subcostatus* Matumoto sp. nov. Cretaceous Japan, **T. Matumoto** Proc. Imp. Acad. Tokyo 18 [1942] pp. 24, 25 f. 1 d.

†*Trimarginia* gen. nov. Oppeliid ?
genotype *T. sinaitica* sp. nov. 'presumed Upper Bajocian,' W. J. Arkell
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†*Tulites arabicus* p. 283 pl. 25 f. 5-7;
T. tuwaigensis p. 284 pl. 25 f. 3; *T. erymnoides* p. 254 pl. 25 f. 1, 4; spp. nov.
Jurassic Central Arabia, W. J. Arkell
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†*Vaginoceras* redefined, R. H. Flower
(1).

†*Wellerites russiensis* sp. nov. Tchal-
kovsk Province, Ural-Sakmar near
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Carboniferous sandstone, V. E. Ruzh-

entzev C.R. Acad. Sci. U.R.S.S. N.S.
84 1 p. 133.

†*Whitella umbonata* a diagnostic
species of the Whitewater formation,
S. Ohio, J. Conkin.

†*Xenoceras oncoceroides* gen. et sp.
nov. Lower Devonian (Helderbergian)
New Scotland shaly limestone between
New Salem and Thatcher Park, R. H.
Flower Bull. Wagner. Inst. Sci. Philad.
26 1 1951 p. 2, 3 pl. 1.

†*Zelandites odiensis lateumbilicata*, *Z. mihoensis capricornus* spp. in sched.
Cretaceous Japan, T. Matsumoto Proc.
Imp. Acad. Tokyo 18 [1942] p. 666.